

Bilaga 1: Fakta om statistiken

I den tekniska beskrivningen som följer ges en kortfattad redogörelse av undersökningens uppläggning. En mera utförlig redogörelse för tillvägagångssättet finns i Appendix 15: Teknisk rapport från ULF 1990–1993 samt i Supplement till appendix 15: Teknisk tilläggsinformation om ULF 1994–2005. Dessa finns att tillgå på SCB:s hemsida www.scb.se/le010, se Teknisk information om ULF. En produktbeskrivning finns också tillgänglig på SCB:s hemsida på Internet.

Kort historik

Utbyggnaden av Undersökningen av levnadsförhållanden (ULF) skedde etappvis. Vid starten hösten 1974 ingick välfärdskomponenterna hälsa, ekonomi, sysselsättning och arbetsmiljö, utbildning samt boende, 1976 tillkom fritid och sociala relationer, 1978 politiska resurser, trygghet och transporter. Fr.o.m. 1979 tillämpas i ULF en indelning i fyra huvudtema som återkommer med viss periodicitet (komponentrotation, se tablå 1).

I varje ULF-årgång ingår ett antal centrala indikatorer från varje komponent. Några frågor behöver man ställa årligen för att bilda gängse bakgrundsvariabler, t.ex. familjecykel och socioekonomisk grupp. Andra frågor ingår årligen för att ge underlag för en kontinuerlig uppföljning av utvecklingen på olika områden.

Urvalen 1975–1979 omfattade personer i åldern 16–74 år. Åren 1980–1987 höjdes den övre åldersgränsen till 84 år och i undersökningen 1988–89 slopades den övre åldersgränsen helt. Åren 1990–2001 var den övre åldersgränsen åter 84 år. Från och med 2002 finns ingen övre åldersgräns, undersökningen omfattar nu befolkningen 16 år och uppåt..

I tablå 2 i nästa avsnitt redovisas hur urvalsstorlekar och bortfall har varierat under åren.

Tablå 1
Teman och periodicitet inom ULF-undersökningarna

HUVUDTEMA	Periodicitet				
<i>SOCIALA RELATIONER</i>					
Politiska resurser	1978	1984-85	1992-93	2000-01	
Trygghet	1978	1984-85	1992-93	2000-01	
Sociala relationer, familj	1976	1984-85	1992-93	2000-01	
<i>ARBETSLIVET</i>					
Sysselsättning och arbetsmiljö	1975/77	1979	1986-87	1994-95	2002-03
Ekonomi	1975/77	1979	1986-87	1994-95	2002-03
Utbildning	1975/77	1979	1986-87	1994-95	2002-03
<i>HÄLSA OCH OMSORG</i>	1975/77	1980-81	1988-89	1996-97	2004-05
<i>FYSISK MILJÖ</i>					
Boendeförhållanden	1975	1982-83	1990-91	1999	2006-07
Transporter	1978	1982-83	1990-91	1999	2006-07
Fritid	1976	1982-83	1990-91	1999	2006-07

Undersökningsobjekt, population och redovisningsgrupper

Undersökningarna är inriktade på att ta fram statistiska uppgifter för den grupp av personer som fyller 16–84 år under undersökningsåret och stadigvarande är bosatta i Sverige. Ständigvarande bosatt är den som är bokförd i riket och icke vistas utomlands långvarigt.

Oftast redovisas resultat för olika delgrupper av populationen, s.k. redovisningsgrupper. Redovisningsgrupperna erhålls genom att befolkningen indelas efter sådana bakgrundsvariabler som kön, ålder, familjecykel, socioekonomisk grupp, H-region, nationell bakgrund etc.

Datinsamlingen pågår hela året och resultaten är en sorts genomsnitt över året (respektive över en tvåårs- eller flerårsperiod). Därför avviker befolkningstotalerna i ULF något från dem som redovisas i befolkningsstatistiken, vilka avser förhållandena vid årsskiftet. Skillnaderna beror på dödlighet samt emigration och immigration och är av begränsad storlek.

För vissa variabler kan man även ta fram resultat som gäller populationer bestående av t.ex. hushåll eller barn. I den följande tekniska diskussionen kommer vi att använda den generella benämningen objekt i stället för att i varje särskilt fall tala om individ, hushåll etc.

Urvalsförfarande

I undersökningen studeras ett stort antal förhållanden (undersökningsvariabler) för vilka kraven på statistisk precision varierar. Något underlag för bestämning av en exakt urvalsstorlek finns därför inte, utan dimensioneringen av urvalet sker utifrån överväganden om behoven av särredovisning av resultaten i olika redovisningsgrupper. Med redovisningsgrupper menas delgrupper av en population för vilka särskilda resultat tas fram.

Urvalet dras systematiskt efter ålder ur SCB:s register över totalbefolkningen (RTB). Urvalet torde vara likvärdigt med ett obundet systematiskt urval (OSU). Från urvalen avlägsnas de personer som varit med i ULF under de senaste sju åren.

Över- och undertäckning samt bortfall

Begreppet *övertäckning* innebär att urvalsramen innehåller objekt som ej tillhör populationen. Övertäckningen består av personer som är avlidna eller vistas utomlands långvarigt.

Med *undertäckning* avses personer som ingår i populationen men ej i urvalsramen och därför saknar urvalssannolikhet. Eventuell undertäckning beror främst på brister i folkbokföringen eller på att vissa personer blivit bokförda först efter det att urvalsramen upprättats.

Så kallat *objektbortfall* föreligger när en person som tillhör urvalet och undersökningspopulationen ej medverkar i undersökningen. Dessutom förekommer s.k. partiellt bortfall vilket uppkommer när en person medverkar i undersökningen men ej svarar på alla frågor. Storleken av detta uppgår i regel till högst ett par procent.

Tablå 2
Urvalsstorlekar och bortfall i ULF-undersökningen.
Utvecklingen 1975–2005.

År	Nettourval	Antal intervjuer	Bortfall i procent		
			Totalt	Därav: Vagrare	Ej anträffade
1975	14 256	11 582	18,8	17,8	0,6
1976	14 411	11 144	21,0	19,5	1,1
1977	14 494	11 699	19,3	17,6	1,1
1978	12 119	10 307	15,0	13,6	0,8
1979	11 389	9 468	16,9	15,4	1,0
1980	8 418	7 261	13,7	11,3	1,6
1981	8 903	7 703	13,5	10,3	2,1
1982	8 419	7 290	13,4	10,4	2,1
1983	7 952	6 663	16,2	13,2	2,2
1984	8 673	7 211	16,9	13,6	2,2
1985	7 915	6 585	16,8	12,3	2,8
1986	6 171	4 774	22,6	17,7	3,1
1987	8 754	7 052	19,4	14,4	2,9
1988	8 189	6 514	20,5	14,6	3,7
1989	8 552	6 781	20,7	14,5	4,0
1990	7 946	6 191	22,1	16,7	3,5
1991	7 402	5 827	21,3	16,0	4,0
1992	7 481	5 980	20,1	14,8	3,3
1993	7 685	6 190	19,5	13,8	4,1
1994	7 494	6 001	19,9	13,9	4,5
1995	7 475	6 014	19,6	13,2	4,4
1996	7 483	5 891	21,3	14,4	5,0
1997	7 467	5 807	22,2	14,4	5,8
1998	7 472	5 732	23,3	16,3	5,1
1999	7 482	5 734	23,4	15,1	6,1
2000	7 456	5 680	23,9	15,3	6,8
2001	7 469	5 805	22,1	14,6	5,9
2002	7 969	5 973	25,0	16,0	6,8
2003	7 975	6 033	24,3	15,8	6,5
2004	7 477	5 591	25,2	17,2	6,4
2005	5 697	4 277	24,9	16,2	7,0

I undersökningen förekommer också ett mindre antal indirekta intervjuer, dvs. intervjuer där uppgifterna om intervjupersonen inhämtas från annan person, som väl känner urvalspersonens förhållanden. Vid sådana intervjuer utgår emellertid vissa frågor som endast kan besvaras av den person som själv berörs. De indirekt intervjuade utgör emellertid endast cirka 1-2 procent av samtliga intervjuade.

Estimation och variansberäkning

I undersökningen studeras främst totala antalet objekt (vanligen personer eller hushåll) med en viss egenskap, procenttal samt medelvärden i population och redovisningsgrupper.

Datainsamlingen fördelas över hela kalenderåret. De redovisade resultaten från t.ex. 2002-2004 års undersökningar kan därför uppfattas som ett genomsnitt för dessa år. Eftersom samma åldersbegränsning gäller för populationen under hela undersökningsåret kommer populationen under året att minska i storlek till följd av dödsfall och emigration. Ett tillskott

erhålls genom immigranter som mantalsskriver sig i Sverige. På grund av detta kommer de skattade befolkningstotalerna att skilja sig från dem som gäller vid årets början på ett sätt som beror på samverkan mellan de tre nämnda faktorerna.

Vid estimation indelas urvalet i efterstrata. Inom vart och ett av dessa görs enkel kompensationsvägning för bortfallet. Systematiska fel uppstår om fördelningarna för olika undersökningsresultat i bortfallet skiljer sig från de fördelningar som skulle erhållas vid OSU från urvalen i respektive efterstratum. För en utförlig beskrivning av urvals- och skattningsförfarandena hänvisas till den tekniska rapporten, Appendix 15, och supplementen till denna.

Den efterstratifiering som görs leder till att den summerade befolkningen enligt ULF kommer att stämma med den totalräknade befolkningsstatistiken för ett antal grupper med avseende på kön, ålder, civilstånd och H-region. Vid skattning av totalt antal personer har vi rekommenderat formeln för OSU, men den ovan nämnda efterstratifieringen leder ofta till att OSU-formeln ger en överskattning av den faktiska variansen. Särskilt påtagligt är detta då den studerade redovisningsgruppen sammanfaller med en enskild uppräkningsklass eller en summa av uppräkningsklasser. I dessa fall blir variansen nära noll.

Exakta variansskattningar har av kostnadsskäl inte genomförts. För att man ändå skall kunna göra uttalanden om det slumpmässiga felet i skattningarna har hjälptabeller över approximativa längden på halva 95-procentiga konfidensintervall beräknats för skattningar av procenttal och skillnader mellan procenttal i redovisningsgrupper. Dessa redovisas i slutet av denna bilaga. Här beskrivs även konstruktionen av dessa approximativa intervall.

Genomförande

Intervjublanketterna har utarbetats vid SCB i samråd med referensgrupper för de olika välfärdskomponenterna. I varje planeringsomgång görs ett antal provintervjuer för att se hur nya frågor fungerar i fältet och för att få en uppfattning om tidsåtgången.

Datainsamlingen sker huvudsakligen genom besöksintervjuer. Telefonintervjuer görs dels om intervjupersonen uttryckligen begär det, dels i samband med fältarbetets uppföljningsfas. Huvuddelen av telefonintervjuerna genomförs av en vid SCB centralt placerad telefongrupp.

Före intervjun får varje intervjuperson ett kortfattat informationsbrev och en folder där undersökningens innehåll och sekretessföreskrifterna presenteras. Den som ingår i panelen får ett något annorlunda brev där det påminns om att han/hon blivit intervjuad tidigare. Överenskommelse om intervjun träffas i regel per telefon. I vissa fall skickas ett andra brev till personer som vägrat vid intervjuarens första kontakt.

De intervjupersoner som är intresserade av undersökningens resultat får vid intervjun en artikelsamling som grundar sig på ULF-materialet och belyser välfärden ur olika synvinklar.

De inkomna intervjublanketterna avprickas och går direkt till dataregistrering. Därefter sker maskinella kontroller och kodning, upprättning och

manuell kodning. Vid behov tas telefonkontakt med intervjupersonerna för komplettering eller korrigeringar.

Utöver intervjudata insamlas också vissa registeruppgifter rörande bl.a. inkomstförhållanden (se den tekniska rapporten, appendix 15 eller 16).

Resultatens tillförlitlighet

För att bedöma säkerheten i undersökningsresultaten måste man ta hänsyn till en rad faktorer som kan medföra fel i resultaten. Med fel menas här att skattningen av en parameters värde skiljer sig från dess sanna värde.

Det totala felet som uppträder i skattningar vid undersökningar av denna typ kan efter orsak grovt indelas i följande feltyper:

- 1) **Övertäckningsfel**, dvs. fel som beror på att objekt som ej tillhör undersökningspopulationen ingår i urvalsramen och kan komma med vid resultatredovisningen.
- 2) **Undertäckningsfel**, dvs. fel som beror på att vissa objekt i undersökningspopulationen saknas i urvalsramen.
- 3) **Bortfallsfel**, dvs. fel som beror på att mätvärde för vissa objekt saknas för en eller flera undersökningsvariabler.
- 4) **Mätfel**, dvs. fel som t.ex. kan bero på att intervjupersonen missuppfattat frågor eller på att intervjuare feltolkat instruktioner eller missuppfattat intervjupersonens svar.
- 5) **Bearbetningsfel**, dvs. fel som kan uppkomma vid det manuella eller maskinella handhavandet av det insamlade materialet.
- 6) **Stickprovsfel**, dvs. fel i skattningen som beror på att endast ett stickprov undersöks och vars storlek bestäms av urvalsstorlek, urvalsförfarande och skattningsmetod.

Storleken av det totala felet i en skattning kan diskuteras med hjälp av en felmodell. Denna utformas med hänsyn till urvalsförfarande, skattningsformel och felkomponenter. För beräkning av det totala felet krävs kunskaper om de olika felkomponenternas storlek. Den kunskap som finns är dock ofta ej kvantifierbar varför exakta beräkningar av felets storlek sällan kan göras.

Felmodellen kan utformas så att det totala felet i en skattning kan delas upp i ett systematiskt och ett icke-systematiskt fel. De ovan nämnda feltyperna kan bidra både till det systematiska felet och det icke-systematiska felet.

Det icke-systematiska felet är ett uttryck för den slumpmässiga avvikelsen från skattningens förväntade värde och beror främst på stickprovsstorleken. Storleken på det icke-systematiska felet kan uppskattas från undersökningsresultaten. Det anges ofta i form av skattningens standardavvikelse eller som en funktion av denna, t.ex. i form av ett s.k. konfidensintervall. Konfidensgraden är ett mått på sannolikheten att man vid den valda proceduren skall erhålla ett intervall som innehåller skattningens förväntade värde.

Ett systematiskt fel föreligger då skattningens förväntade värde skiljer sig från parameterns sanna värde. Anledningen till förekomsten av systematiska fel kan vara estimatorns matematiska egenskaper eller systematiskt felaktiga mätningar. Storleken av de systematiska felen kan ofta endast bli

föremål för bedömning. Det bör dock observeras att samma feltyp kan ha olika inverkan på olika estimatorer. Ett bortfall, även av måttlig storlek, medför en automatisk underskattning av totaler om inte särskilda vägningförfaranden tillgrips, men behöver inte medföra att ett systematiskt fel uppträder vid skattning av medelvärden.

Vid förekomst av systematiska fel är sannolikheten att ett konfidensintervall innehåller det sanna parametervärdet lägre än den angivna konfidensgraden. Så länge det systematiska felet är mindre än en femtedel av det icke-systematiska felet, s.k. slumpfelet, är betydelsen av det förstnämnda felet dock försumbar om man använder intervall med konfidensgraden 95 procent.

Hjälptabeller

För att underlätta diskussionen om kvalitén i vissa skattningar, redovisas i slutet av denna bilaga längden av halva approximativa 95-procentiga konfidensintervall för skattningar av procenttal, differenser mellan procenttal och totalt antal.

Tabell 1 anger approximationen av halva 95-procentiga konfidensintervallens längd för procenttalsskattningar för individer i redovisningsgrupper. Beräkningen har skett enligt formeln:

$$1,96 \sqrt{P_g \left(\frac{100 - P_g}{n_g} \right)}$$

n_g är antalet intervjuade i redovisningsgruppen.

Tabell 2 anger approximationen av halva 95-procentiga konfidensintervall för differenser mellan två procenttal som baseras på redovisningsgrupper utan gemensamma medlemmar och där objekten är individer. Beräkningen har skett enligt formeln:

$$1,96 \sqrt{P_g \left(100 - P_g \right) \frac{1}{n_{g1}} + \frac{1}{n_{g2}}}$$

Som hjälptabellerna är uppställda är det lämpligt att låta $ng1$ vara bastalet i den mindre av de två jämförda redovisningsgrupperna och $ng2$ bastalet i den större. Om man sätter P_g lika med det av de två jämförda procenttalen som ligger närmast 50 får man ett säkert men onödigt stort konfidensintervall. Ett P_g som bildas genom sammanvägning av $P1$ och $P2$ ger ett kortare och normalt mer korrekt intervall.

Exempel 1 för beräkning av konfidensintervall för procenttal

Enligt översiktstabell 1 i kapitel 12 "De äldres hälsoutveckling" (sid. 312) uppger 29,6 procent av samtliga kvinnor över 55 år (befolkningsgrupp nummer 11 i tabellen) att man har svåra besvär till följd av någon långvarig sjukdom. I kolumnen "Antal intervjuer 2002-2004" längst till höger på uppslaget framgår att denna skattning bygger på 4 084 intervjuer.

Enligt tabell 1 nedan, "Hjälptabeller", är halva 95-procentiga konfidensintervall 1,4 procentenheter då antalet intervjuer är 4 000 och procenttalet 30.

Detta innebär att med 95 procents sannolikhet har mellan 28,2 och 31,0 procent ($29,6 \pm 1,4$) bland kvinnor över 55 år svåra besvär på grund av någon långvarig sjukdom.

Exempel 2 för beräkning av konfidensintervall för differenser mellan procenttal

Enligt samma tabell, översiktstabell 1: "Hälsotillstånd och sjuklighet", sid. 317, kan vi se att det är vanligare att äldre kvinnliga arbetare, eller f.d. arbetare, är rörelsehindrade, än motsvarande grupp bland männen. I tabellens rad 84 anges att 21,7 procent av kvinnliga arbetare, 55-84 år, är rörelsehindrade. Motsvarande andel bland män (arbetare eller f.d. arbetare, 55-84 år, rad 91) är 16,0. Kan denna skillnad på 5,7 procentenheter förklaras av slumpmässiga orsaker beroende på att vi endast undersökt ett urval av befolkningen?

De två skattningarna bygger på 1 528 intervjuer bland kvinnorna och 1 234 intervjuer bland motsvarande grupp av män. Vi utnyttjar tabell 2 i bilagan med hjälptabeller och går in på den rad där ng_1 är 1 200 och ng_2 är 1 500. Av kolumnen för procenttalet 20 (den närmaste kolumnen efter sammanvägning av de båda procenttalen 21,7 och 16,0) kan avläsas att halva 95-procentiga konfidensintervallet är 3,0 procentenheter.

Detta betyder att skillnaden mellan de båda procenttalen med 95 procents sannolikhet ligger mellan 2,7 och 8,7 procentenheter ($5,7 \pm 3,0$). Eftersom intervallet inte omfattar värdet noll, kan vi med 95 procents sannolikhet säga att skillnaden är signifikant.

Hjälpstabeller

Tabell 1

**Approximativa halva 95-procentiga konfidensintervall för procenttal.
Tabeller där redovisningsenheten är personer.**

		Procenttal									
Bastal	5	10	15	20	25	30	35	40	45	50	
ng	95	90	85	80	75	70	65	60	55	50	
40	6.8	9.3	11.1	12.4	13.4	14.2	14.8	15.2	15.4	15.5	
50	6.0	8.3	9.9	11.1	12.0	12.7	13.2	13.6	13.8	13.9	
75	4.9	6.8	8.1	9.1	9.8	10.4	10.8	11.1	11.3	11.3	
100	4.3	5.9	7.0	7.8	8.5	9.0	9.3	9.6	9.8	9.8	
125	3.8	5.3	6.3	7.0	7.6	8.0	8.4	8.6	8.7	8.8	
150	3.5	4.8	5.7	6.4	6.9	7.3	7.6	7.8	8.0	8.0	
175	3.2	4.4	5.3	5.9	6.4	6.8	7.1	7.3	7.4	7.4	
200	3.0	4.2	4.9	5.5	6.0	6.4	6.6	6.8	6.9	6.9	
225	2.8	3.9	4.7	5.2	5.7	6.0	6.2	6.4	6.5	6.5	
250	2.7	3.7	4.4	5.0	5.4	5.7	5.9	6.1	6.2	6.2	
300	2.5	3.4	4.0	4.5	4.9	5.2	5.4	5.5	5.6	5.7	
350	2.3	3.1	3.7	4.2	4.5	4.8	5.0	5.1	5.2	5.2	
400	2.1	2.9	3.5	3.9	4.2	4.5	4.7	4.8	4.9	4.9	
500	1.9	2.6	3.1	3.5	3.8	4.0	4.2	4.3	4.4	4.4	
600	1.7	2.4	2.9	3.2	3.5	3.7	3.8	3.9	4.0	4.0	
700	1.6	2.2	2.6	3.0	3.2	3.4	3.5	3.6	3.7	3.7	
800	1.5	2.1	2.5	2.8	3.0	3.2	3.3	3.4	3.4	3.5	
900	1.4	2.0	2.3	2.6	2.8	3.0	3.1	3.2	3.3	3.3	
1 000	1.4	1.9	2.2	2.5	2.7	2.8	3.0	3.0	3.1	3.1	
1 200	1.2	1.7	2.0	2.3	2.5	2.6	2.7	2.8	2.8	2.8	
1 400	1.1	1.6	1.9	2.1	2.3	2.4	2.5	2.6	2.6	2.6	
1 500	1.1	1.5	1.8	2.0	2.2	2.3	2.4	2.5	2.5	2.5	
1 600	1.1	1.5	1.7	2.0	2.1	2.2	2.3	2.4	2.4	2.5	
1 800	1.0	1.4	1.6	1.8	2.0	2.1	2.2	2.3	2.3	2.3	
2 000	1.0	1.3	1.6	1.8	1.9	2.0	2.1	2.1	2.2	2.2	
2 500	0.9	1.2	1.4	1.6	1.7	1.8	1.9	1.9	2.0	2.0	
3 000	0.8	1.1	1.3	1.4	1.5	1.6	1.7	1.8	1.8	1.8	
4 000	0.7	0.9	1.1	1.2	1.3	1.4	1.5	1.5	1.5	1.5	
5 000	0.6	0.8	1.0	1.1	1.2	1.3	1.3	1.4	1.4	1.4	
6 000	0.6	0.8	0.9	1.0	1.1	1.2	1.2	1.2	1.3	1.3	
7 000	0.5	0.7	0.8	0.9	1.0	1.1	1.1	1.1	1.2	1.2	
8 000	0.5	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.1	
9 000	0.5	0.6	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.0	
11 000	0.4	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	
13 000	0.4	0.5	0.6	0.7	0.7	0.8	0.8	0.8	0.9	0.9	

Tabell 2
Approximativ längd av halva 95-procentiga konfidensintervall för differenser mellan procenttal. Tabeller där redovisningsenheten är personer.

		Procenttal									
Bastal		5	10	15	20	25	30	35	40	45	50
ng1	ng2	95	90	85	80	75	70	65	60	55	50
40	40	9.6	13.1	15.6	17.5	19.0	20.1	20.9	21.5	21.8	21.9
40	50	9.1	12.5	14.8	16.6	18.0	19.1	19.8	20.4	20.7	20.8
40	75	8.4	11.5	13.7	15.3	16.6	17.6	18.3	18.8	19.1	19.2
40	100	8.0	11.0	13.1	14.7	15.9	16.8	17.5	18.0	18.2	18.3
40	125	7.8	10.7	12.7	14.2	15.4	16.3	17.0	17.4	17.7	17.8
40	150	7.6	10.5	12.5	14.0	15.1	16.0	16.6	17.1	17.4	17.4
40	175	7.5	10.3	12.3	13.7	14.9	15.7	16.4	16.8	17.1	17.2
40	200	7.4	10.2	12.1	13.6	14.7	15.6	16.2	16.6	16.9	17.0
40	250	7.3	10.0	11.9	13.4	14.5	15.3	15.9	16.4	16.6	16.7
40	300	7.2	9.9	11.8	13.2	14.3	15.1	15.7	16.2	16.4	16.5
40	400	7.1	9.8	11.6	13.0	14.1	14.9	15.5	15.9	16.2	16.3
40	500	7.0	9.7	11.5	12.9	13.9	14.8	15.4	15.8	16.0	16.1
40	600	7.0	9.6	11.4	12.8	13.9	14.7	15.3	15.7	15.9	16.0
40	900	6.9	9.5	11.3	12.7	13.7	14.5	15.1	15.5	15.8	15.8
40	1 200	6.9	9.5	11.2	12.6	13.6	14.4	15.0	15.4	15.7	15.8
40	1 500	6.8	9.4	11.2	12.6	13.6	14.4	15.0	15.4	15.6	15.7
40	2 000	6.8	9.4	11.2	12.5	13.6	14.3	14.9	15.3	15.6	15.6
40	3 000	6.8	9.4	11.1	12.5	13.5	14.3	14.9	15.3	15.5	15.6
40	4 000	6.8	9.3	11.1	12.5	13.5	14.3	14.9	15.3	15.5	15.6
40	5 000	6.8	9.3	11.1	12.4	13.5	14.3	14.8	15.2	15.5	15.6
40	7 000	6.8	9.3	11.1	12.4	13.5	14.2	14.8	15.2	15.5	15.5
40	9 000	6.8	9.3	11.1	12.4	13.5	14.2	14.8	15.2	15.5	15.5
40	11 000	6.8	9.3	11.1	12.4	13.4	14.2	14.8	15.2	15.4	15.5
40	13 000	6.8	9.3	11.1	12.4	13.4	14.2	14.8	15.2	15.4	15.5
50	50	8.5	11.8	14.0	15.7	17.0	18.0	18.7	19.2	19.5	19.6
50	75	7.8	10.7	12.8	14.3	15.5	16.4	17.1	17.5	17.8	17.9
50	100	7.4	10.2	12.1	13.6	14.7	15.6	16.2	16.6	16.9	17.0
50	125	7.1	9.8	11.7	13.1	14.2	15.0	15.6	16.1	16.3	16.4
50	150	7.0	9.6	11.4	12.8	13.9	14.7	15.3	15.7	15.9	16.0
50	175	6.8	9.4	11.2	12.6	13.6	14.4	15.0	15.4	15.6	15.7
50	200	6.8	9.3	11.1	12.4	13.4	14.2	14.8	15.2	15.4	15.5
50	250	6.6	9.1	10.8	12.1	13.1	13.9	14.5	14.9	15.1	15.2
50	300	6.5	9.0	10.7	12.0	13.0	13.7	14.3	14.7	14.9	15.0
50	400	6.4	8.8	10.5	11.8	12.7	13.5	14.0	14.4	14.6	14.7
50	500	6.3	8.7	10.4	11.6	12.6	13.3	13.9	14.2	14.5	14.5
50	600	6.3	8.7	10.3	11.5	12.5	13.2	13.8	14.1	14.4	14.4
50	900	6.2	8.5	10.2	11.4	12.3	13.1	13.6	14.0	14.2	14.2
50	1 200	6.2	8.5	10.1	11.3	12.3	13.0	13.5	13.9	14.1	14.1
50	1 500	6.1	8.5	10.1	11.3	12.2	12.9	13.4	13.8	14.0	14.1
50	2 000	6.1	8.4	10.0	11.2	12.2	12.9	13.4	13.7	14.0	14.0
50	3 000	6.1	8.4	10.0	11.2	12.1	12.8	13.3	13.7	13.9	14.0
50	5 000	6.1	8.4	9.9	11.1	12.1	12.8	13.3	13.6	13.9	13.9
50	7 000	6.1	8.3	9.9	11.1	12.0	12.7	13.3	13.6	13.8	13.9
50	9 000	6.1	8.3	9.9	11.1	12.0	12.7	13.3	13.6	13.8	13.9
50	11 000	6.1	8.3	9.9	11.1	12.0	12.7	13.3	13.6	13.8	13.9
50	13 000	6.1	8.3	9.9	11.1	12.0	12.7	13.2	13.6	13.8	13.9

Tabell 2 (forts.)

		Procenttal									
Bastal		5	10	15	20	25	30	35	40	45	50
ng1	ng2	95	90	85	80	75	70	65	60	55	50
75	75	7.0	9.6	11.4	12.8	13.9	14.7	15.3	15.7	15.9	16.0
75	100	6.5	9.0	10.7	12.0	13.0	13.7	14.3	14.7	14.9	15.0
75	125	6.2	8.6	10.2	11.5	12.4	13.1	13.7	14.0	14.2	14.3
75	150	6.0	8.3	9.9	11.1	12.0	12.7	13.2	13.6	13.8	13.9
75	175	5.9	8.1	9.7	10.8	11.7	12.4	12.9	13.3	13.5	13.5
75	200	5.8	8.0	9.5	10.6	11.5	12.2	12.7	13.0	13.2	13.3
75	250	5.6	7.7	9.2	10.3	11.2	11.8	12.3	12.6	12.8	12.9
75	300	5.5	7.6	9.0	10.1	11.0	11.6	12.1	12.4	12.6	12.7
75	400	5.4	7.4	8.8	9.9	10.7	11.3	11.8	12.1	12.3	12.3
75	500	5.3	7.3	8.7	9.7	10.5	11.1	11.6	11.9	12.1	12.1
75	600	5.2	7.2	8.6	9.6	10.4	11.0	11.4	11.8	11.9	12.0
75	900	5.1	7.1	8.4	9.4	10.2	10.8	11.2	11.5	11.7	11.8
75	1 200	5.1	7.0	8.3	9.3	10.1	10.7	11.1	11.4	11.6	11.7
75	1 500	5.1	7.0	8.3	9.3	10.0	10.6	11.1	11.4	11.5	11.6
75	2 000	5.0	6.9	8.2	9.2	10.0	10.6	11.0	11.3	11.5	11.5
75	3 000	5.0	6.9	8.2	9.2	9.9	10.5	10.9	11.2	11.4	11.5
75	5 000	5.0	6.8	8.1	9.1	9.9	10.4	10.9	11.2	11.3	11.4
75	7 000	5.0	6.8	8.1	9.1	9.9	10.4	10.9	11.1	11.3	11.4
75	9 000	5.0	6.8	8.1	9.1	9.8	10.4	10.8	11.1	11.3	11.4
75	11 000	5.0	6.8	8.1	9.1	9.8	10.4	10.8	11.1	11.3	11.4
75	13 000	5.0	6.8	8.1	9.1	9.8	10.4	10.8	11.1	11.3	11.3
100	100	6.0	8.3	9.9	11.1	12.0	12.7	13.2	13.6	13.8	13.9
100	125	5.7	7.9	9.4	10.5	11.4	12.1	12.5	12.9	13.1	13.1
100	150	5.5	7.6	9.0	10.1	11.0	11.6	12.1	12.4	12.6	12.7
100	175	5.4	7.4	8.8	9.8	10.6	11.3	11.7	12.0	12.2	12.3
100	200	5.2	7.2	8.6	9.6	10.4	11.0	11.4	11.8	11.9	12.0
100	250	5.1	7.0	8.3	9.3	10.0	10.6	11.1	11.4	11.5	11.6
100	300	4.9	6.8	8.1	9.1	9.8	10.4	10.8	11.1	11.3	11.3
100	400	4.8	6.6	7.8	8.8	9.5	10.0	10.5	10.7	10.9	11.0
100	500	4.7	6.4	7.7	8.6	9.3	9.8	10.2	10.5	10.7	10.7
100	600	4.6	6.4	7.6	8.5	9.2	9.7	10.1	10.4	10.5	10.6
100	900	4.5	6.2	7.4	8.3	8.9	9.5	9.9	10.1	10.3	10.3
100	1 200	4.4	6.1	7.3	8.2	8.8	9.3	9.7	10.0	10.1	10.2
100	1 500	4.4	6.1	7.2	8.1	8.8	9.3	9.7	9.9	10.1	10.1
100	2 000	4.4	6.0	7.2	8.0	8.7	9.2	9.6	9.8	10.0	10.0
100	3 000	4.3	6.0	7.1	8.0	8.6	9.1	9.5	9.8	9.9	10.0
100	5 000	4.3	5.9	7.1	7.9	8.6	9.1	9.4	9.7	9.8	9.9
100	7 000	4.3	5.9	7.0	7.9	8.5	9.0	9.4	9.7	9.8	9.9
100	9 000	4.3	5.9	7.0	7.9	8.5	9.0	9.4	9.7	9.8	9.9
100	11 000	4.3	5.9	7.0	7.9	8.5	9.0	9.4	9.7	9.8	9.8
100	13 000	4.3	5.9	7.0	7.9	8.5	9.0	9.4	9.6	9.8	9.8

Tabell 2 (forts.)

		Procenttal									
Bastal		5	10	15	20	25	30	35	40	45	50
ng1	ng2	95	90	85	80	75	70	65	60	55	50
125	125	5.4	7.4	8.9	9.9	10.7	11.4	11.8	12.1	12.3	12.4
125	150	5.2	7.1	8.5	9.5	10.3	10.9	11.3	11.6	11.8	11.9
125	175	5.0	6.9	8.2	9.2	9.9	10.5	10.9	11.2	11.4	11.5
125	200	4.9	6.7	8.0	8.9	9.7	10.2	10.7	10.9	11.1	11.2
125	250	4.7	6.4	7.7	8.6	9.3	9.8	10.2	10.5	10.7	10.7
125	300	4.5	6.3	7.5	8.3	9.0	9.6	10.0	10.2	10.4	10.4
125	400	4.4	6.0	7.2	8.0	8.7	9.2	9.6	9.8	10.0	10.0
125	500	4.3	5.9	7.0	7.8	8.5	9.0	9.3	9.6	9.8	9.8
125	600	4.2	5.8	6.9	7.7	8.3	8.8	9.2	9.4	9.6	9.6
125	900	4.1	5.6	6.7	7.5	8.1	8.6	8.9	9.2	9.3	9.4
125	1 200	4.0	5.5	6.6	7.4	8.0	8.4	8.8	9.0	9.2	9.2
125	1 500	4.0	5.5	6.5	7.3	7.9	8.4	8.7	8.9	9.1	9.1
125	2 000	3.9	5.4	6.5	7.2	7.8	8.3	8.6	8.9	9.0	9.0
125	3 000	3.9	5.4	6.4	7.2	7.7	8.2	8.5	8.8	8.9	8.9
125	5 000	3.9	5.3	6.3	7.1	7.7	8.1	8.5	8.7	8.8	8.9
125	7 000	3.9	5.3	6.3	7.1	7.7	8.1	8.4	8.7	8.8	8.8
125	9 000	3.8	5.3	6.3	7.1	7.6	8.1	8.4	8.6	8.8	8.8
125	11 000	3.8	5.3	6.3	7.1	7.6	8.1	8.4	8.6	8.8	8.8
125	13 000	3.8	5.3	6.3	7.0	7.6	8.1	8.4	8.6	8.8	8.8
150	150	4.9	6.8	8.1	9.1	9.8	10.4	10.8	11.1	11.3	11.3
150	175	4.8	6.5	7.8	8.7	9.4	10.0	10.4	10.7	10.8	10.9
150	200	4.6	6.4	7.6	8.5	9.2	9.7	10.1	10.4	10.5	10.6
150	250	4.4	6.1	7.2	8.1	8.8	9.3	9.7	9.9	10.1	10.1
150	300	4.3	5.9	7.0	7.8	8.5	9.0	9.3	9.6	9.8	9.8
150	400	4.1	5.6	6.7	7.5	8.1	8.6	9.0	9.2	9.3	9.4
150	500	4.0	5.5	6.5	7.3	7.9	8.4	8.7	8.9	9.1	9.1
150	600	3.9	5.4	6.4	7.2	7.7	8.2	8.5	8.8	8.9	8.9
150	900	3.8	5.2	6.2	6.9	7.5	7.9	8.2	8.5	8.6	8.6
150	1 200	3.7	5.1	6.1	6.8	7.4	7.8	8.1	8.3	8.4	8.5
150	1 500	3.7	5.0	6.0	6.7	7.3	7.7	8.0	8.2	8.4	8.4
150	2 000	3.6	5.0	5.9	6.6	7.2	7.6	7.9	8.1	8.3	8.3
150	3 000	3.6	4.9	5.9	6.6	7.1	7.5	7.8	8.0	8.2	8.2
150	5 000	3.5	4.9	5.8	6.5	7.0	7.4	7.7	8.0	8.1	8.1
150	7 000	3.5	4.9	5.8	6.5	7.0	7.4	7.7	7.9	8.0	8.1
150	9 000	3.5	4.8	5.8	6.5	7.0	7.4	7.7	7.9	8.0	8.1
150	11 000	3.5	4.8	5.8	6.4	7.0	7.4	7.7	7.9	8.0	8.1
150	13 000	3.5	4.8	5.7	6.4	7.0	7.4	7.7	7.9	8.0	8.0
175	175	4.6	6.3	7.5	8.4	9.1	9.6	10.0	10.3	10.4	10.5
175	200	4.4	6.1	7.2	8.1	8.8	9.3	9.7	9.9	10.1	10.1
175	250	4.2	5.8	6.9	7.7	8.4	8.9	9.2	9.5	9.6	9.7
175	300	4.1	5.6	6.7	7.5	8.1	8.5	8.9	9.1	9.3	9.3
175	400	3.9	5.3	6.3	7.1	7.7	8.1	8.5	8.7	8.8	8.9
175	500	3.8	5.2	6.1	6.9	7.5	7.9	8.2	8.4	8.6	8.6
175	600	3.7	5.1	6.0	6.7	7.3	7.7	8.0	8.2	8.4	8.4
175	900	3.5	4.9	5.8	6.5	7.0	7.4	7.7	7.9	8.1	8.1
175	1 200	3.5	4.8	5.7	6.3	6.9	7.3	7.6	7.8	7.9	7.9
175	1 500	3.4	4.7	5.6	6.3	6.8	7.2	7.5	7.7	7.8	7.8

Tabell 2 (forts.)

		Procenttal									
Bastal		5	10	15	20	25	30	35	40	45	50
ng1	ng2	95	90	85	80	75	70	65	60	55	50
175	2 000	3.4	4.6	5.5	6.2	6.7	7.1	7.4	7.6	7.7	7.7
175	3 000	3.3	4.6	5.4	6.1	6.6	7.0	7.3	7.5	7.6	7.6
175	5 000	3.3	4.5	5.4	6.0	6.5	6.9	7.2	7.4	7.5	7.5
175	7 000	3.3	4.5	5.4	6.0	6.5	6.9	7.2	7.3	7.5	7.5
175	9 000	3.3	4.5	5.3	6.0	6.5	6.9	7.1	7.3	7.4	7.5
175	11 000	3.3	4.5	5.3	6.0	6.5	6.8	7.1	7.3	7.4	7.5
175	13 000	3.3	4.5	5.3	6.0	6.5	6.8	7.1	7.3	7.4	7.5
200	200	4.3	5.9	7.0	7.8	8.5	9.0	9.3	9.6	9.8	9.8
200	250	4.1	5.6	6.6	7.4	8.1	8.5	8.9	9.1	9.3	9.3
200	300	3.9	5.4	6.4	7.2	7.7	8.2	8.5	8.8	8.9	8.9
200	400	3.7	5.1	6.1	6.8	7.4	7.8	8.1	8.3	8.4	8.5
200	500	3.6	4.9	5.9	6.6	7.1	7.5	7.8	8.0	8.2	8.2
200	600	3.5	4.8	5.7	6.4	6.9	7.3	7.6	7.8	8.0	8.0
200	900	3.3	4.6	5.5	6.1	6.6	7.0	7.3	7.5	7.6	7.7
200	1 200	3.3	4.5	5.3	6.0	6.5	6.9	7.1	7.3	7.4	7.5
200	1 500	3.2	4.4	5.3	5.9	6.4	6.8	7.0	7.2	7.3	7.4
200	2 000	3.2	4.4	5.2	5.8	6.3	6.7	6.9	7.1	7.2	7.3
200	3 000	3.1	4.3	5.1	5.7	6.2	6.6	6.8	7.0	7.1	7.2
200	5 000	3.1	4.2	5.0	5.7	6.1	6.5	6.7	6.9	7.0	7.1
200	7 000	3.1	4.2	5.0	5.6	6.1	6.4	6.7	6.9	7.0	7.0
200	9 000	3.1	4.2	5.0	5.6	6.1	6.4	6.7	6.9	7.0	7.0
200	11 000	3.0	4.2	5.0	5.6	6.1	6.4	6.7	6.9	7.0	7.0
200	13 000	3.0	4.2	5.0	5.6	6.0	6.4	6.7	6.8	7.0	7.0
250	250	3.8	5.3	6.3	7.0	7.6	8.0	8.4	8.6	8.7	8.8
250	300	3.7	5.0	6.0	6.7	7.3	7.7	8.0	8.2	8.4	8.4
250	400	3.4	4.7	5.6	6.3	6.8	7.2	7.5	7.7	7.9	7.9
250	500	3.3	4.6	5.4	6.1	6.6	7.0	7.2	7.4	7.6	7.6
250	600	3.2	4.4	5.3	5.9	6.4	6.8	7.0	7.2	7.3	7.4
250	900	3.1	4.2	5.0	5.6	6.1	6.4	6.7	6.9	7.0	7.0
250	1 200	3.0	4.1	4.9	5.5	5.9	6.2	6.5	6.7	6.8	6.8
250	1 500	2.9	4.0	4.8	5.4	5.8	6.1	6.4	6.6	6.7	6.7
250	2 000	2.9	3.9	4.7	5.3	5.7	6.0	6.3	6.4	6.5	6.6
250	3 000	2.8	3.9	4.6	5.2	5.6	5.9	6.2	6.3	6.4	6.5
250	5 000	2.8	3.8	4.5	5.1	5.5	5.8	6.1	6.2	6.3	6.4
250	7 000	2.7	3.8	4.5	5.0	5.5	5.8	6.0	6.2	6.3	6.3
250	9 000	2.7	3.8	4.5	5.0	5.4	5.8	6.0	6.2	6.3	6.3
250	11 000	2.7	3.8	4.5	5.0	5.4	5.7	6.0	6.1	6.2	6.3
250	13 000	2.7	3.8	4.5	5.0	5.4	5.7	6.0	6.1	6.2	6.3
300	300	3.5	4.8	5.7	6.4	6.9	7.3	7.6	7.8	8.0	8.0
300	400	3.3	4.5	5.3	6.0	6.5	6.9	7.1	7.3	7.4	7.5
300	500	3.1	4.3	5.1	5.7	6.2	6.6	6.8	7.0	7.1	7.2
300	600	3.0	4.2	4.9	5.5	6.0	6.4	6.6	6.8	6.9	6.9
300	900	2.8	3.9	4.7	5.2	5.7	6.0	6.2	6.4	6.5	6.5
400	400	3.0	4.2	4.9	5.5	6.0	6.4	6.6	6.8	6.9	6.9
400	500	2.9	3.9	4.7	5.3	5.7	6.0	6.3	6.4	6.5	6.6

Tabell 2 (forts.)

		Procenttal									
Bastal ng1	ng2	5 95	10 90	15 85	20 80	25 75	30 70	35 65	40 60	45 55	50 50
400	600	2.8	3.8	4.5	5.1	5.5	5.8	6.0	6.2	6.3	6.3
400	900	2.6	3.5	4.2	4.7	5.1	5.4	5.6	5.8	5.9	5.9
400	1 200	2.5	3.4	4.0	4.5	4.9	5.2	5.4	5.5	5.6	5.7
400	1 500	2.4	3.3	3.9	4.4	4.8	5.1	5.3	5.4	5.5	5.5
400	2 000	2.3	3.2	3.8	4.3	4.6	4.9	5.1	5.3	5.3	5.4
400	3 000	2.3	3.1	3.7	4.2	4.5	4.8	5.0	5.1	5.2	5.2
400	5 000	2.2	3.1	3.6	4.1	4.4	4.7	4.9	5.0	5.1	5.1
400	7 000	2.2	3.0	3.6	4.0	4.4	4.6	4.8	4.9	5.0	5.0
400	9 000	2.2	3.0	3.6	4.0	4.3	4.6	4.8	4.9	5.0	5.0
400	11 000	2.2	3.0	3.6	4.0	4.3	4.6	4.8	4.9	5.0	5.0
400	13 000	2.2	3.0	3.6	4.0	4.3	4.6	4.8	4.9	5.0	5.0
500	500	2.7	3.7	4.4	5.0	5.4	5.7	5.9	6.1	6.2	6.2
500	600	2.6	3.6	4.2	4.7	5.1	5.4	5.7	5.8	5.9	5.9
500	900	2.4	3.3	3.9	4.4	4.7	5.0	5.2	5.4	5.4	5.5
500	1 200	2.3	3.1	3.7	4.2	4.5	4.8	5.0	5.1	5.2	5.2
500	1 500	2.2	3.0	3.6	4.0	4.4	4.6	4.8	5.0	5.0	5.1
500	2 000	2.1	2.9	3.5	3.9	4.2	4.5	4.7	4.8	4.9	4.9
500	3 000	2.1	2.8	3.4	3.8	4.1	4.3	4.5	4.6	4.7	4.7
500	5 000	2.0	2.8	3.3	3.7	4.0	4.2	4.4	4.5	4.6	4.6
500	7 000	2.0	2.7	3.2	3.6	3.9	4.2	4.3	4.4	4.5	4.5
500	9 000	2.0	2.7	3.2	3.6	3.9	4.1	4.3	4.4	4.5	4.5
500	11 000	2.0	2.7	3.2	3.6	3.9	4.1	4.3	4.4	4.5	4.5
500	13 000	2.0	2.7	3.2	3.6	3.9	4.1	4.3	4.4	4.4	4.5
600	600	2.5	3.4	4.0	4.5	4.9	5.2	5.4	5.5	5.6	5.7
600	900	2.3	3.1	3.7	4.1	4.5	4.7	4.9	5.1	5.1	5.2
600	1 200	2.1	2.9	3.5	3.9	4.2	4.5	4.7	4.8	4.9	4.9
600	1 500	2.1	2.8	3.4	3.8	4.1	4.3	4.5	4.6	4.7	4.7
600	2 000	2.0	2.7	3.3	3.6	4.0	4.2	4.4	4.5	4.5	4.6
600	3 000	1.9	2.6	3.1	3.5	3.8	4.0	4.2	4.3	4.4	4.4
600	5 000	1.8	2.5	3.0	3.4	3.7	3.9	4.0	4.1	4.2	4.2
600	7 000	1.8	2.5	3.0	3.3	3.6	3.8	4.0	4.1	4.1	4.2
600	9 000	1.8	2.5	3.0	3.3	3.6	3.8	3.9	4.0	4.1	4.1
600	11 000	1.8	2.5	2.9	3.3	3.6	3.8	3.9	4.0	4.1	4.1
600	13 000	1.8	2.5	2.9	3.3	3.5	3.8	3.9	4.0	4.1	4.1
900	900	2.0	2.8	3.3	3.7	4.0	4.2	4.4	4.5	4.6	4.6
900	1 200	1.9	2.6	3.1	3.5	3.7	4.0	4.1	4.2	4.3	4.3
900	1 500	1.8	2.5	3.0	3.3	3.6	3.8	3.9	4.0	4.1	4.1
900	2 000	1.7	2.4	2.8	3.1	3.4	3.6	3.8	3.9	3.9	3.9
900	3 000	1.6	2.2	2.7	3.0	3.2	3.4	3.6	3.6	3.7	3.7
900	5 000	1.5	2.1	2.5	2.8	3.1	3.3	3.4	3.5	3.5	3.5
900	7 000	1.5	2.1	2.5	2.8	3.0	3.2	3.3	3.4	3.5	3.5
900	9 000	1.5	2.1	2.4	2.7	3.0	3.1	3.3	3.4	3.4	3.4
900	11 000	1.5	2.0	2.4	2.7	2.9	3.1	3.2	3.3	3.4	3.4
900	13 000	1.5	2.0	2.4	2.7	2.9	3.1	3.2	3.3	3.4	3.4

Tabell 2 (forts.)

		Procenttal									
Bastal		5	10	15	20	25	30	35	40	45	50
ng1	ng2	95	90	85	80	75	70	65	60	55	50
1 200	1 200	1.7	2.4	2.9	3.2	3.5	3.7	3.8	3.9	4.0	4.0
1 200	1 500	1.7	2.3	2.7	3.0	3.3	3.5	3.6	3.7	3.8	3.8
1 200	2 000	1.6	2.1	2.6	2.9	3.1	3.3	3.4	3.5	3.6	3.6
1 200	3 000	1.5	2.0	2.4	2.7	2.9	3.1	3.2	3.3	3.3	3.3
1 200	5 000	1.4	1.9	2.2	2.5	2.7	2.9	3.0	3.1	3.1	3.2
1 200	7 000	1.3	1.8	2.2	2.4	2.7	2.8	2.9	3.0	3.0	3.1
1 200	9 000	1.3	1.8	2.2	2.4	2.5	2.8	2.9	3.0	3.0	3.0
1 200	11 000	1.3	1.8	2.1	2.4	2.6	2.7	2.8	2.9	3.0	3.0
1 200	13 000	1.3	1.8	2.1	2.4	2.6	2.7	2.8	2.9	2.9	3.0
1 500	1 500	1.6	2.1	2.6	2.9	3.1	3.3	3.4	3.5	3.6	3.6
1 500	2 000	1.5	2.0	2.4	2.7	2.9	3.1	3.2	3.3	3.3	3.3
1 500	3 000	1.4	1.9	2.2	2.5	2.7	2.8	3.0	3.0	3.1	3.1
1 500	5 000	1.3	1.7	2.1	2.3	2.5	2.6	2.8	2.8	2.9	2.9
1 500	7 000	1.2	1.7	2.0	2.2	2.4	2.6	2.7	2.7	2.8	2.8
1 500	9 000	1.2	1.6	2.0	2.2	2.4	2.5	2.6	2.7	2.7	2.7
1 500	11 000	1.2	1.6	1.9	2.2	2.3	2.5	2.6	2.6	2.7	2.7
1 500	13 000	1.2	1.6	1.9	2.1	2.3	2.4	2.5	2.6	2.7	2.7
2 000	2 000	1.4	1.9	2.2	2.5	2.7	2.8	3.0	3.0	3.1	3.1
2 000	3 000	1.2	1.7	2.0	2.3	2.5	2.6	2.7	2.8	2.8	2.8
2 000	5 000	1.1	1.6	1.9	2.1	2.2	2.4	2.5	2.5	2.6	2.6
2 000	7 000	1.1	1.5	1.8	2.0	2.2	2.3	2.4	2.4	2.5	2.5
2 000	9 000	1.1	1.5	1.7	1.9	2.1	2.2	2.3	2.4	2.4	2.4
2 000	11 000	1.0	1.4	1.7	1.9	2.1	2.2	2.3	2.3	2.4	2.4
2 000	13 000	1.0	1.4	1.7	1.9	2.0	2.2	2.2	2.3	2.3	2.4
3 000	3 000	1.1	1.5	1.8	2.0	2.2	2.3	2.4	2.5	2.5	2.5
3 000	5 000	1.0	1.4	1.6	1.8	2.0	2.1	2.2	2.2	2.3	2.3
3 000	7 000	0.9	1.3	1.5	1.7	1.9	2.0	2.0	2.1	2.1	2.1
3 000	9 000	0.9	1.2	1.5	1.7	1.8	1.9	2.0	2.0	2.1	2.1
3 000	11 000	0.9	1.2	1.4	1.6	1.7	1.9	1.9	2.0	2.0	2.0
3 000	13 000	0.9	1.2	1.4	1.6	1.7	1.8	1.9	1.9	2.0	2.0
5 000	5 000	0.9	1.2	1.4	1.6	1.7	1.8	1.9	1.9	2.0	2.0
5 000	7 000	0.8	1.1	1.3	1.5	1.6	1.7	1.7	1.8	1.8	1.8
5 000	9 000	0.8	1.0	1.2	1.4	1.5	1.6	1.6	1.7	1.7	1.7
5 000	11 000	0.7	1.0	1.2	1.3	1.4	1.5	1.6	1.6	1.7	1.7
5 000	13 000	0.7	1.0	1.2	1.3	1.4	1.5	1.6	1.6	1.6	1.6
7 000	7 000	0.7	1.0	1.2	1.3	1.4	1.5	1.6	1.6	1.6	1.7
7 000	9 000	0.7	0.9	1.1	1.2	1.4	1.4	1.5	1.5	1.6	1.6
7 000	11 000	0.7	0.9	1.1	1.2	1.3	1.4	1.4	1.5	1.5	1.5
7 000	13 000	0.6	0.9	1.0	1.2	1.3	1.3	1.4	1.4	1.4	1.5
9 000	9 000	0.6	0.9	1.0	1.2	1.3	1.3	1.4	1.4	1.5	1.5
9 000	11 000	0.6	0.8	1.0	1.1	1.2	1.3	1.3	1.4	1.4	1.4
9 000	13 000	0.6	0.8	1.0	1.1	1.2	1.2	1.3	1.3	1.3	1.3

Tabell 3
Approximativ längd av halva 95-procentiga konfidensintervall för totaler. Tabeller där redovisningsenheten är personer. Gäller ej för grupper som enbart består av personer som är 75 år eller äldre.

Total- skattning	Halva intervallet	Total- skattning	Halva intervallet
10 000	4 262	1 250 000	42 496
20 000	6 022	1 500 000	45 328
30 000	7 370	1 750 000	47 602
40 000	8 503	2 000 000	49 394
50 000	9 498	2 500 000	51 721
60 000	10 396	3 000 000	52 541
70 000	11 220	3 500 000	51 924
80 000	11 985	4 000 000	49 818
90 000	12 701	4 250 000	48 150
100 000	13 377	4 500 000	46 018
125 000	14 924	4 750 000	43 351
150 000	16 314	5 000 000	40 045
175 000	17 584	5 200 000	36 824
200 000	18 759	5 300 000	34 975
250 000	20 883	5 400 000	32 931
300 000	22 778	5 500 000	30 655
350 000	24 496	5 600 000	28 088
400 000	26 073	5 700 000	25 143
500 000	28 892	5 800 000	21 667
600 000	31 364	5 850 000	19 642
700 000	33 566	5 900 000	17 341
800 000	35 548	5 950 000	14 631
900 000	37 345	6 000 000	11 223
1 000 000	38 982		

Bilaga 2 Rapportförteckning

I serien *Levnadsförhållanden* har följande rapporter utkommit:

- | | | | |
|----|--|----|--|
| 1 | Hälsa och sjukvårds-
konsumtion 1974 | 20 | Hur jämställda är vi?
1975/77 |
| 2 | Sysselsättning och
arbetsplatsförhållanden
1974 | 21 | Om barns villkor |
| 3 | Boendeförhållanden 1974 | 22 | Social rapport om
ojämlikheten i Sverige |
| 4 | Utbildning och studie-
deltagande 1974 | 23 | Våra dagliga resor. Behov
och resurser |
| 5 | Ekonomiska förhållanden
1974 | 24 | Offer för vålds- och
egendomsbrott 1978 |
| 6 | Levnadsförhållanden –
utveckling och nuläge enligt
tillgänglig statistik | 25 | Handikappad. Delaktig och
jämlig? 1977/78 |
| 7 | Sysselsättning och
arbetstider 1975 | 26 | Data om invandrare |
| 8 | Översikt över välfärdens
fördelning 1975 | 27 | Social Report on Inequality
in Sweden |
| 9 | Invandrarnas
levnadsförhållanden 1975 | 28 | Välfärd för vem? |
| 11 | Hälsa och sjukvårds-
konsumtion 1975 | 29 | De studerandes ekonomi
och levnadsstandard
1976/78 |
| 12 | Arbetsmiljö 1975 | 30 | Ekonomisk stagnation –
vad har hänt med
välfärden? 1975–1981 |
| 13 | Boendeförhållanden 1975 | 31 | Politiska resurser 1978 |
| 14 | Utbildning, vuxenstudier
och förvärvsarbete 1975 | 32 | Arbetsmiljö 1979 |
| 15 | Arbetsförhållanden och
sjukfrånvaro | 33 | Perspektiv på välfärden
1982 |
| 16 | Låginkomstfamiljerna –
vilka de är och hur de lever
1975/76 | 34 | Skattereformens
fördelningseffekter |
| 17 | Fritidsaktiviteter 1976 | 35 | Utbildning och
utbildningseffekter |
| 18 | Ensamhet och gemenskap –
perspektiv på social
förankring 1976 | 36 | Arbetslöshetens offer |
| 19 | Regionala levnadsnivå-
variationer 1975/76 | 37 | Oregelbundna och
obekväma arbetstider |
| | | 38 | Tema invandare |
| | | 39 | Hushållens förmögenheter
årsskiftet 1981/82 |

40	Vem utnyttjar den offentliga sektorns tjänster?	66	Offer för vålds- och egendomsbrott 1978–1989
41	Handikappade	67	Vuxnas studiedeltagande 1975–1989
42	Ohälsa och sjukvård 1975–1983	68	Ohälsa och sjukvård 1988-89. Preliminära resultat (tabeller)
43	Pensionärer	69	Tema invandrare
44	Våra dagliga resor. Behov och resurser 1978–1983	70	Mer eller mindre arbete? – löntagarnas arbetstidsönskemål
45	Boende 1975–1983	71	Familj i förändring
46	Den svenske bonden	72	Sociala relationer 1988-89. Tabeller
47	Sysselsättning 1975–1983 (tabellsammanställning)	73	Några medicinska handikappgruppers levnadsförhållanden
49	Tandhälsa och tandvård	74	Handikappade 1975 –1989
50	Det svenska klassamhället 1975–1985	75	Facklig anslutning och aktivitet 1980–1989
51	Ojämligheten i Sverige 1975–1985	76	Ohälsa och sjukvård 1980–1989
52	Socialbidragstagarna 1983–1985	77	Utbildning och uppväxtförhållanden
53	Perspektiv på välfärden 1987	78	Arbetsförhållanden, ohälsa och sjukfrånvaro 1975–1989
54	Ett decennium av stagnerande realinkomster	79	I Tid och Otid. En undersökning om kvinnors och mäns tidsanvändning 1990/91
56	Fritid 1982–1983	80	Tidsanvändningsundersökningen 1990/91. Tabeller
57	Minskad lönespridning 1968–1981	81	Pensionärer 1980–1989
58	Inequality in Sweden	82	Våra dagliga resor 1982–1991
59	Så använder vi tiden	83	Vilka ungdomar motionerar mer?
60	Jordbrukarnas levnadsförhållanden 1975–1987	84	Boende 1975–1991
61	Arbetsmiljö 1986–1987. Preliminära resultat (tabeller)	85	Fritid 1976–1991
62	Barns levnadsvillkor	86	Föreningslivet i Sverige – en statistisk belysning
63	Leva i Västervik	87	Barns hälsa 1988–89
64	Ungdomars inträde i arbetslivet 1973–1985		
65	Sysselsättning, arbetstider, arbetsmiljö 1986–1987		

88	Offer för vålds- och egendomsbrott 1978–1993	100	Välfärd och ofärd på 1990-talet
89	Barn och deras familjer 1992–93	101	Associational life in Sweden (General Welfare, Social Capital, Training in Democracy)
90	Politiska resurser och aktiviteter 1978–1994	102	Politiska resurser och aktiviteter 1992–2001
91	Välfärd och ojämlikhet i 20-årsperspektiv 1975–1995	103	Fritid 1976–2002
92	Sysselsättning, arbetstider och arbetsmiljö 1994-95	104	Offer för våld och egendomsbrott 1978–2002
93	Äldres levnadsförhållanden 1980–1999	105	Bruk och missbruk, vanor och ovanor – Hälsorelaterade levnadsvanor 1980–2002
94	Tandhälsa och tandvårdsutnyttjande 1975–1999	106	Perspektiv på välfärden 2004
95	Ohälsa och sjukvård 1980–2000	107	Så bor vi i Sverige
96	Integration till svensk välfärd? Om invandrares välfärd på 1990-talet	108	Ungdomars etablering: Generationsklyftan 1980-2003
97	Funktionshindrade 1988–1999	109	Sysselsättning, arbetstider och arbetsmiljö 2002-2003
98	Föreningslivet i Sverige (Välfärd; Socialt kapital; Demokratiskola)	110	Barns villkor
99	Tid för vardagsliv	111	Utbildning: nivå och inriktning 1975-2003

I serien Levnadsförhållanden har även följande appendix utkommit:

- 1 Teknisk rapport avseende 1974 års undersökning av levnadsförhållanden
- 2 Försök med hushållsansats i SCB:s undersökningar av levnadsförhållanden. En mätteknisk och statistisk utvärdering (slut)
- 3 Teknisk rapport avseende 1975 och 1976 års undersökning av levnadsförhållanden (slut)
- 4 Teknisk rapport avseende 1977 och 1978 års undersökning av levnadsförhållanden
- 5 Förändringsskattningar i undersökningarna av levnadsförhållanden (ULF). En redovisning av metodstudier och rekommenderad metodik
- 6 Teknisk rapport avseende 1980-81 års undersökning av levnadsförhållanden
- 7 Teknisk rapport avseende 1982-83 års undersökning av levnadsförhållanden
- 8 Återintervjustudier i undersökningarna av levnadsförhållanden (ULF) 81, 83 och 84
- 9 Mätproblem i surveyfrågor. Analys av variationen i tillförlitlighet
- 10 Den socioekonomiska indelningen (SEI) i tre SCB-undersökningar
- 11 Kvaliteten vid retrospektiva frågor om tidigare yrkesexponering. En utvärdering av yrkeshistoriken i undersökningarna av levnadsförhållanden (ULF)
- 12 Återintervjustudie i undersökningen av levnads förhållanden (ULF) 1989
- 13 Teknisk rapport avseende 1984-85 års, 1986-87 års och 1988-89 års undersökning av levnadsförhållanden
- 14 Genomlysning av undersökningen av levnadsförhållanden (ULF)
- 15 Teknisk rapport avseende 1990-91 års och 1992-93 års undersökning av levnadsförhållanden
- 16 The Swedish Survey of Living Conditions. Design and methods

Supplement till Appendix 15 och 16: Teknisk information om ULF 1994-2005. Finns endast på SCB:s hemsida www.scb.se

- 17 Analys av bortfallet bland "utsatta" grupper i Undersökningen av levnadsförhållanden (ULF) 1986-1999

Summary

By Joachim Vogel and Lars Häll

Introduction

Living conditions of the population vary according to a number of stratified variables such as sex, labour market status, occupational category, generation, region, family relationships and nationality. Statistics Sweden regularly conducts analyses of welfare trends of various population groups to find out how welfare gaps change over time, how they increase and decrease, and how specific welfare problems for these groups develop in the long-term perspective. The report series Living Conditions includes a partial series directed towards these matters (reports on vulnerable groups). The more comprehensive reports known as social reports show how the Swedish system of distribution has changed on the whole and how it looks in international comparison. Statistics Sweden's surveys and previous reports illustrate, among other things, that class differences and gender differences have decreased in the long-term while generational differences have risen as far as we can follow them back in the statistics¹.

This report describes welfare trends of those aged 55 and above from three perspectives. Firstly we illustrate *how welfare of older persons has changed over the*

last 25 years by using a broad perspective of welfare for some ten or so welfare variables. Here we show development of employment, work environment, real income, material standard of living, leisure time, political participation, social network, security and safety, health and care services for older persons, and whether their welfare has decreased or increased.

Our second perspective concerns a *systematic welfare comparison with other age groups*. Here we would like to show if welfare of older persons is in line with that of younger generations: if the generation gaps have widened or become more narrow. The general debate has often placed age differences in the welfare provisions in relation to the informal generation contract, and to increasing contradictions of interest among the generations. The report describes development since 1980.

Our third perspective is a series of special studies that are directed towards *the relation of older persons to the labour market, income conditions, social relations and health*.

This report thus combines a broad description of welfare within the framework for a general social report; the situation of older persons is closely examined by focusing on the economic and social effects of changes as people grow older and make the transition from work to retirement.

This report has been produced within the frame for research appropriations to

¹ Vogel, J. and Råbäck, G. (2004): Materiell ojämlikhet i tids- och internationellt perspektiv. Chapter 4 of Valfärd och ofärd på 90-talet. Report 100 in the series Living Conditions. Statistics Sweden

Umeå University, the Sociological Institute, from the Research Council for Working Life and Social Sciences (FAS) and partial financing by Statistics Sweden. The report has been produced by a research group at Umeå University, Karolinska Institute, and Stockholm University (See the list of authors on page 8). The collection of data, data processing and this report has been carried out in cooperation with Statistics Sweden as an extension of the Living Conditions Survey (LCS) 2002/03. The database firstly includes a special survey of older persons (aged 55 and over), PSAE (=Panel Survey of Ageing and the Elderly), and secondly Statistics Sweden's general surveys of living conditions 1980-2004. PSAE includes older persons within the LCS, and a specific sample of older persons without an older age limit, in total approximately 5 500 persons. PSAE consists of a panel sample that has previously been interviewed 2-3 times earlier at 8 year intervals within the frame for the LCS.

This report is the main report from PSAE and has been published in Statistics Sweden's series of reports since it falls within the frame for social reports. The report has been produced by researchers from Umeå University, Stockholm University, Karolinska Institute and Statistics Sweden (see list of authors).

Welfare is determined by the welfare production that occurs on *the labour market* (income from employment, security of income, work environment), and is supplemented and modified via *the welfare state* (public transfers and services), and through the *family* (support from parents, one's own dependency burden, large-scale benefits of living together). When we study the welfare provisions for different groups in the population we see the effects of cooperation among the three *welfare institutions* (known as "the welfare mix" consisting of the labour market, the

welfare state and the family), partly in the present and partly in the past.

We can see *welfare as a career* outstretched over our lifetimes. During the different phases of our lives we have different needs and resources; the labour market, the welfare state and the family also offer us numerous opportunities. Young people will establish themselves in the adult world and begin their welfare career via occupational training, moving from their parents' homes, entering the labour market, finding their own residence, settling down with a partner and starting a family, as consumers with their own finances and participating as adults in community life. Upon reaching middle age, individuals are faced with responsibilities of supporting their families, building careers and improving their living standards. This period is then followed by the terms of aging, with increasing health problems, leaving the labour market, retirement, lower income and standard of living together with changes in social networks. The various ages in life have different conditions and welfare problems. The findings in this report provide extensive information for government policy for the elderly.

Method of analysis

The basis of this report is PSAE 2002/03 and Statistics Sweden's annual surveys on living conditions (LCS). In order to present detailed welfare information for finely broken down age groups (5-year age classes from ages 20-84) with good precision, calculations have been made for four periods which include several years (4 years in the beginning of the 1980s, the end of the 1980s, the mid-1990s, and the beginning of the 2000s respectively). The data material includes about 20 000 interviews for each such period.

We refine the effects of age in this report: all calculations of age differences are conducted by examining structural

differences in class, family situation, sex and religion. These calculations are based on regression analysis, where separate estimations are made for finely defined age groups (5-year age classes). The calculations are reported in part as coloured graphs to allow for maximum clarity of the results, and in part as more general tables.

Most of the chapters in this report make use of the large random samples of older persons (age 55 and over) in PSAE and LCS, which include ages without an upper limit, as well as access to the panel sample.

PART 1

Older persons on the labour market

Chapter 2: Employment and work environment of older persons

Employment among older men has decreased on the long-term (since the 1970s), but has increased sharply among older women. In the beginning of the 1990s Sweden experienced a drop in employment for persons of all ages, even among older people, but not at all of the same scope as among immigrants and those under age 30. After 2000 there was a dramatic increase in employment among those age 55 and over, for women and men alike.

In an international comparison Sweden has the highest level of employment among older persons in western Europe. Sweden leads the way towards higher factual retirement age, and illustrates a balance between demographic development and pension rights.

Unemployment and underemployment among older persons follow economic trends during the 1990s, but with a higher level at age 60, compared to middle-aged persons. However, the burden of unemployment is considerably lower than that affecting

young persons (under age 30) and immigrants.

Work requirements became more stringent during the 1990s. *Physical pressure such as hustle and bustle and unskilled labour* has increased for all ages since the 1980s, even among older persons. There has also been an increase in what is known as *instrumental attitude towards work* (see definition in section 2.4), above all for younger persons.

Our analysis in connection with retirement age and *occurrences during the last five years of employment* show that about half of those who retired at age 65 had worked part-time during the last years.

Among those who retired early (around age 60), a number had changed employers, occupations or work duties during the last five years, and some were temporarily employed.

Every other person who retired early had been on long-term sick leave, and every fifth person had been involved in labour market training, rehabilitation or work training.

Chapter 3: Retirement preferences and terms of employment

There is no particular desire to work after age 65. Only one person in twenty considers retiring after age 65.

Half of the older Swedish labour force (age 55 and over) would like to retire before age 65. Eight out of ten report they would like *more leisure time*, while about 30 percent list *health* or that *work has become too demanding* as reasons for early retirement.

The most common reason for working after age 65 is a positive attitude towards work.

People with *lower health standards* prefer a lower retirement age. *Low socioeconomic position* and *low education* are tied to preference for a lower retirement age. This also holds true for older persons

who work in an environment with high physical pressure.

Important retirement preferences for women are various aspects of social support. Weak social support goes hand in hand with a preference for a lower retirement age.

Chapter 4: Retirement and well-being

Nearly every third retired person would have preferred that they had retired *later* than they actually did. This applies above all to women, younger retired persons, those who retired early due to poor health (disability pension) and those with a low level of education.

Those receiving *disability pension, with low education, and those who retired early* report that they had relatively few opportunities to influence the time of retirement.

Nearly half of all retired persons give *health reasons* as a contributing factor for leaving the labour market.

Those who retired due to reasons beyond the control of the individual (for instance health problems, lack of demand for skills) report lower *psychosocial well-being* than those who retired for other reasons.

Those who had the *opportunity to influence the time for their retirement* and who are satisfied with the point in time have a better psychosocial well-being than those who were less able to influence this time and who were dissatisfied.

PART 2 Income and standard of living of older persons

Chapter 5: Income and poverty

This chapter deals with income development of older people from *two perspectives*, firstly over time (the last 20 years), and secondly in comparison with

younger people (aged 20-55) The calculations concern *income from employment, disposable income* (after taxes and social assistance, calculated per consumption unit), *poverty* (according to social assistance norm), together with *wealthy persons* (disposable income over 150 and 200 percent respectively of social assistance norm), as well as *those with acute financial problems*.

Real income from employment stagnated during the employment crisis in the beginning of the 1990s. This crisis was followed by a period of recovery marked by sharp rises in income from employment up until 2002/03. Income also rose significantly for those age 55 and over after the mid-1990s.

Retired persons have received considerable increases in *disposable income* over the last 20 years. Those aged 50-60 have experienced even better trends, particularly those of the middle class. Income development for the younger generation (under age 40) has been considerably weaker. The generation gaps have widened.

The generational differences follow a general pattern which we will meet in most of the analyses of material living conditions in this report (chapters 5, 6, 9, 10). We see a general shift and redistribution of income and standard of living upwards in age groups.

Income development during the last 20 years has above all been driven by employment trends and pension rights. For those who are now older we see a long-term increase of employment among women since the 1970s, which was hardly affected by the crisis in the 1990s. Employment and income fell sharply during the 1990s for young people and immigrants who should have established themselves on the labour market. Employment development involved a redistribution of disposable income among the generations and upwards in age groups.

At the same time as employment rose, pension rights also accumulated for those who later in the 1990s and 2000s reached retirement age. This was above all the case for women. *Older retired persons with low pension rights due to less participation on the labour market were gradually replaced by new retired persons who could look back on a longer working life.*

The previous pension system in Sweden required 30 years of employment for full pension, without reduction of the supplementary pension ATP. Those entering retirement during the 1990s received more pension credits according to the ATP supplementary pension, which also meant that *pensions for all these people* increased year by year.

The percentage of *poor people* has in the long term dropped during the last 20 years for all age groups except those aged 20-29. The effect is greatest among retired persons, which in part is due to the ATP reform, and in part to higher pension rights based on more extensive participation in working life. Older retired persons were gradually replaced by retired persons who had the maximum of ATP credits and who had been on the labour market longer.

The proportion of *wealthy persons* (>150 percent of the social assistance norm) has sharply increased for all age groups since the mid-1980s. This increase appeared above all during the latter 1990s, while the first part of the period was marked by stagnation for those of working age. According to this indicator, development has also been most favourable for older persons (age 55 and over), where the main factor is increasing pension rights, full ATP pension and increased amount of working time.

Reports about *economic household crises* (difficulty to pay for food, rent, bills) are more common among younger persons who are about to establish themselves on the labour market, start a family and residence and support their children. During and even after the crisis of the

1990s, more and more people reported difficulties in making payments (people applied for social assistance for regular payments, or did not pay the rent, etc.). It was very unusual that these problems were reported by those age 55 and above.

These results apply to *the situation of all retired persons' income situation* at different points in time, calculated on a repeated cross section during the last 20 years. However, another question that *is not answered by the cross-section calculations* is the development of the income situation during those years of retirement (longitudinal analysis). Most older persons are hit by two large cuts of income standard. Upon retirement income drops sharply. Another considerable decrease could be when one's partner dies and the large-scale benefits of cohabitation disappear (one is faced with paying the rent, the car, etc. on one income).

Longitudinal analysis thus reflects another picture of income development of older persons (see details in this chapter as well as in chapters 6 and 7).

Chapter 6: Employment and income 1991-2002: a longitudinal register study

This chapter analyses income development of older persons with the help of Statistics Sweden's complete register statistics (LOUISE) for two purposes:

1. An analysis of *the exit process from the labour market* which is described via the development of income from employment, unemployment benefits, sickness benefits and disability pension after age 55.
2. An analysis of the *economic consequences of the exit process from the labour market*, which is described via development of disposable income, pensions and social assistance, from ages 55-85.

The calculations are done with repeated cross-sections as well as longitudinal sections.

Longitudinal analyses where we follow two birth cohorts (born 1936 and 1928) during the 1990s show that employment of older people drops as early as from age 55. Eighty-nine percent of those born 1936 *had income from employment and business* at age 55 (i.e. in 1991). At age 60 the percentage has decreased to about 75 percent, and during the year one turns 65 to about 39 percent. At age 62 income from employment and business and from pensions and social assistance balance each other.

In the older cohort (born 1928) one left the labour somewhat later than the younger cohort (born 1936): at age 65, 44 percent still had income from employment and business. The trend of earlier exits thus continued during the 1990s. However, this trend was broken in the 2000s, and employment of older persons increased again.

During the 1990s, nearly all (99 percent) had entered retirement latest by age 65. It is very unusual to still have income from employment and business after age 65. At age 67, about 20 percent had income from employment and business. Senior salaried employees and men were over-represented (45 and 26 percent respectively).

Pensions and income from employment during the 1990s

Cross-section calculations for the period 1991-2002 show a better real income development (i.e. of pensions and social assistance) for those aged 68, 75 and 84 respectively during the beginning of the 1990s, than for those who were of working age (at age 55). The supplementary ATP pensions were then index-tied (via the base amount), at the same time when income from employment and business decreased in real terms for all ages (due to mass unemployment and negative growth for

3 years). Between 1993 and 1998 pensions were devalued (the base amount was reduced by 2 percent), but in the mid-1990s there was a strong increase of employment and increase of real income for those of working age.

In *relative* terms (i.e. compared with annual incomes for those of working age) average incomes of retired persons thus increased in the beginning of the 1990s, but *relatively* decreased during the latter part of the 1990s. At the turn of the century, differences in income between those aged 55 (the reference group) and the various ages of retired persons were thus larger than before the crisis at the start of the 1990s.

Low and high income pensioners

Regarding those of working age, the proportion of *those with high incomes* increased sharply (those with total annual income over SEK 240 000 before taxes) during the latter part of the 1990s. Among those aged 55 this increase was between 24 and 41 percent. Among retired persons the increase was marginal.

Despite the devaluation of the indexation, the percentage of *retired persons with low incomes* (less than SEK 90 000 per year from employment, pensions and social assistance, before taxes) decreased during all of the 1990s. This is mainly due to other changes (housing supplementary allowance etc).

Pension levels for younger and older pension cohorts respectively

Incomes of those of working age are determined by the level of activity and level of real income from employment and business. In the old pension system, the pension level was determined by pension rights that were based on income from employment and business during the last 15 years, recalculated at real value. After retirement pensions

were then index-tied via the price base amount².

If there is a growth in real income, the distance increases between income earned from employment and business and that from pensions, according to the old pension system. This occurs gradually and increases with age. In other words: retired persons are not able to enjoy an increase in standard of living in society when they age as retired persons (longitudinal method). For each year of growth, retired persons fall back more and more in relation to their friends and colleagues who are still working. During a lasting period of high growth, differences in income can be significant between those who are still working and the oldest retired persons. However, pensions maintain their real value, as long as price increases and increased living costs do not occur within the consumption panorama of retired persons.

The calculations in chapter 6 also show a sharp effect of the period during the second half of the 1990s: Incomes of those aged 55 increase much faster than the age-specific pension levels. This is due to the sharp growth rate and increased employment.

Chapter 7: Pensions of the future. A simulation study

This chapter compares the national pension system for those aged 65-82 with wage and salary development for three occupations (librarian, salesperson and cleaner). The degree of compensation in the old pension system is compared with the new pension system.

In chapters 5, 6, 9 and 10 we see that income of retired persons as well as their material standard of living have increased markedly over the last 20 years. This increase has to do with two

factors: firstly, the significant increase of employment among women (400 000 jobs) during the 1970s and 1980s that later on gave higher pension rights, and secondly the establishment of the ATP supplementary pension system.

Our simulation of the new pension system shows that we are now entering a new phase, this time with a significant decrease of the national pension. The new pension system gives about one third lower pension than the old pension system, in comparison with final salaries at age 65. In addition, pensions do not completely follow real salary development. In the long-term, this means that retired persons fall back more and more in comparison with those who have income from employment and business. We will once again have greater generational differences concerning income and standard of living among those with income from employment and business and those who are retired.

Adapting to the new pension system

The characteristics of the new pension system have led to an extensive debate about the need for individual and societal adaptation in order to maintain the generation contract.

The new pension system is complex and difficult to assess for the general public. Studies show that the knowledge of the general public about their future pensions is extremely limited. Six out of ten women aged 50-64 do not know how much they will receive as pensions, and the rest think they will get about 60-70 percent of their salary.

The possibilities to individually adapt to the new pension system are thus very limited, if time until retirement is short. Norman (2006) shows that a nurse must save SEK 4 800 per month (SEK 4 250 after taxes) for 20 years in order to reach a compensation degree of 80 percent. Similarly, a compensation of 70 percent requires another 5 years on the labour market and retirement at age 70.

² Between 1993 and 1998 pensions were calculated using a base amount that was reduced by 2 percent

Neither private pension savings in the short-term nor retiring at a later age lead to significant improvements in the short-term.

Different calculations of future pensions give a uniform picture of the vast needs for correction through socio-political measures aside from the pension system. This occurred for example during the 1990s by a sharp increase in expanding supplementary housing allowances.

Calculations for future pensions also show that the space for self-financing for healthcare and care services decrease the older a person gets, while the need for these services increases.

Chapter 8: Do pensions lead to economic vulnerability?

Factors such as economic vulnerability, *the lack of a cash margin* and reports of *difficulties to make regular payments* are unusual among older persons. Retirement in general does not lead to economic problems.

The low occurrence of perceived economic problems can partly be an effect of retired persons adapting to their new income situation.

Chapter 9: Material standard of living

Chapter 9 deals with a broad collection of assets that concern household items, leisure time, the media, transports and a summary index. In chapter 10 there is an analogue analysis of housing conditions.

Here we follow the development of older persons' living standards for 23 years, a long period which is mainly marked by increasing incomes. Our summary *index on standard of living* shows a dramatic increase in standard of living for older persons (age 55 and over) and for retired persons (age 65 and over) since the beginning of the 1980s. The high standard of living from the years of active employment has gradually been

extended to retirement age. At the same time we had a stagnation or even a decrease in standard of living among younger people under age 40 (young persons and young families with children).

The generational differences concerning standard of living have thus changed in favour of retired persons. This is connected to two processes: firstly *the increase of pension rights* (based on increased employment and substitution of older persons with low supplementary ATP pensions with younger persons with full ATP), and secondly *stagnating and reduced income from employment among younger persons during the beginning of the 1990s* (extended education of young persons, increased unemployment on a shrinking labour market, income that is earned later and is lower and less secure).

Statistics Sweden's LCS thus gives a positive picture of the development of standard of living for retired persons *from a cross-sectional perspective, when retired persons in the beginning of the 1980s are compared with older persons of the same age in the beginning of the 2000s*. However, if we follow individual older persons in a longitudinal perspective from working age and into retirement, the picture changes. Retirement normally involves a sharp decrease in income, and often a further drop in standard of living when one's partner passes away (the benefits of cohabitation disappear). *Longitudinal analyses* show that standard of living drops increasingly after age 60³.

Cross-sectional changes are especially considerable concerning the percentage of older persons with *low standard of living*, and this effect is strongest for the oldest persons, where the percentage has dropped by more than half.

Seen analogously, we find that a *high standard of living* has shifted upwards in

³ Chapter 7 includes an analysis of real development of the old and new pension systems.

age, similar to corresponding calculations for income development in chapter 5. The situation of retired persons was not affected by the crisis of the 1990s.

The standard of living for retired persons is illustrated in the detailed analysis for individual usefulness. Higher pensions, increased physical mobility, and more leisure activities lead to an extension of lifestyle of middle-aged persons continuing into their retirement period. *Access to cars* has sharply increased among older persons, but has dropped among those under age 40. Now about 60 percent of those aged 75-84 have access to cars (an increase of 35 percentage points since 1980).

Access to daily newspapers has changed significantly. Among younger persons we see a sharp decrease, while access for older persons has only changed slightly or not at all. Here as well, older people maintain their middle-age lifestyle, while younger people turn to other media (including free newspapers).

Lifestyles of older persons in other areas also increasingly follow patterns of middle-age lifestyles, which have extended to retirement age. This concerns for instance *holiday trips* and household appliances.

Chapter 10: Housing conditions

A majority of Sweden's population live in single dwelling houses (56 percent). This is true for older persons (aged 65-84) and younger ones (aged 30-44). Among younger persons, living in single dwelling houses has *dropped* dramatically since the beginning of the 1980s, while it has *increased* just as much among older persons.

Significant changes have occurred in recent years concerning organisation of public care for the elderly. About 100 000 older persons had permanent residence in *special types of housing* on 1 October

2005, or 15 percent fewer than compared to five years ago.

The number of *hospital beds*, (mainly for older persons) has been sharply reduced, partly due to the effectivisation of health care, but also because of cut-backs. Between 1992 and 2003, the number of hospital beds for geriatrics dropped by 69 percent and within medicine by 27 percent. This has led to many older persons having to move to special housing, as well as the discharge of many older persons who had once lived in normal housing but are now in greater need of care and rehabilitation. The needs for care thus increased both among those who lived in special housing and those who lived in normal housing.

This transition from special housing and a reduced number of hospital beds has resulted in an increase in municipal *home help services*. Among those who live in ordinary housing, the number of those receiving home help services increased from 135 000 to 150 000 between 2000 and 2005. This increase concerns those over age 80, while home help services among those aged 65-79 have decreased.

The following section in the chapter (10.3) deals with *type of tenure*. At the beginning of the 2000s, about half of the population aged 20-84 had ownership rights - a weak decrease of slightly more than one percentage point since the beginning of the 1980s. Sixteen percent live in tenant-owned flats (up 4-5 percentage points), and 32 percent in rented dwellings (minus five percentage points).

Overcrowded living conditions (according to norm 3 which defines overcrowding as more than 1 person per room not including kitchen and living room) have declined for all ages since 1980. This decrease is greatest among those who are older, from 9 to about 3 percent.

Chapter 11: Redistribution of resources among generations

The flow of gifts and help among generations is considerable in the Sweden of today. *Economic gifts* to children and grandchildren follow a clear gradient of class and resources. Socioeconomic gaps are further strengthened by intergenerational transfers. Children whose parents are unskilled or semi-skilled workers seldom receive gifts or loans from their parents, something that is fairly common among above all children whose parents are senior salaried employees. Those who are employed at relatively older ages and those who own their housing are also more likely to give gifts. Parents who are of poor health and single parents more seldom give gifts to their children and grandchildren.

The older the parents are the more common it is that they give away larger amounts of money. These sums are often an advance inheritance, something that was (previously) done for tax purposes. By the giving of gifts and financial support, the parental generations can thus be important players for the younger generations.

Concerning the parental generations' likelihood of giving children and grandchildren *practical help with daily activities*, this largely follows the ability of giving financial support. However, the ability to help declines with increasing age and worsening health. In this case also, it is above all children of salaried employees who are able to receive help. It is thus not so that the lack of ability of wage earners to give financial gifts is weighed by an ability to give support and help in kind instead.

Regarding parents *receiving help* from their children, the pattern is to a certain extent reversed compared to *giving help*. Those who receive the most help are those who are oldest and of poor health. There is thus a clear aspect of healthcare in the relationships of generations. However, for this to occur in large scale,

children must live somewhat nearby their parents. Even here we find class differences concerning the ability to receive help. Above all, senior salaried employees and salaried employees on the middle level receive *a small amount of help* from their children: the category that gives the most help receives the least help in return. This may be due to the fact that this category can better meet their needs via the market, and use public service more efficiently.

Thus the most important conclusions in this chapter are that there is a significant flow of resources among generations, and that this flow continues to strengthen and deepen the economic gaps that already exist in Sweden today. Reproduction of socio-economic differences begins already in childhood and seems to continue throughout a lifetime.

PART 3 Health and care services

Chapter 12: Health trends of older persons

This chapter summarises health trends of older persons according to a series of *global indicators for somatic illness, psychosomatic problems, consumption of care and lifestyle* from Statistics Sweden's annual measurements of health within the frame of the LCS⁴, namely:

- *perceived health problems*, i.e. that the interviewee *cannot* say that he or she has "good or very good health"
- occurrence of some type of *long-term illness*
- of which the occurrence of long-term illness is of *considerable seriousness*
- of which the illness to a high degree results in *reduced ability to work*
- *motor disabilities*

⁴ A corresponding analysis of *disabilities* follows in chapter 13.

These five indicators by and large reflect the same picture of health trends 1980-2003:

1. Poor health increases as people grow older.
2. Poor health *increases* over time (1980-2003) among both young and middle-aged persons alike *according to all the indicators*.
3. Among older persons (about age 60 and over) health *has improved* since 1980 according to some indicators (fewer people *say they have* health problems, fewer report *reduced ability* to work or have *motor disabilities*, but health *has become worse* according to other indicators (more report *long-term illness* and *serious problems*).
4. However, all in all health trends of older persons during the 1990s *have according to these global indicators* been better for older persons than for younger ones (especially those between ages 20-30). Insofar as we can speak about an increased burden on health, this burden applies to a greater extent to younger persons.

There is no clear-cut answer to the question on how health of older persons has developed in recent years. The interview questions have more or less subjective features that leave room for personal assessments from the respondents. These assessments are based on knowledge, experiences and health claims rather than on objective criteria (such as physiological tests or systematic examinations by a doctor). Even if the information in the interview is based on specific illnesses, *medical technology (increased diagnostics, more treatment possibilities) as well as better education and increased knowledge of the respondents about health contribute* and are thus captured in the health interviews.

This would mean that *under-reporting of illness* would *drop* over a longer interval of time. This could then lead to a seemingly worsening of public health, and that real public health improvements would be masked in

trend analyses and health development, such as they appear in the personal interviews⁵.

On the other hand, in the *long-term* we expect positive health effects from the humanisation of working life, the expansion of the social safety net, and public services, advancements in medical technology and treatment methods. These factors have given us a constantly increasing life expectancy, in recent years at a somewhat slower pace. During our observation period (1980-2003) average life expectancy for women has increased by 3.5 years, and for men by 5.1 years.

A longer life expectancy has of course consequences for the prevalence of illness. A longer life expectancy could mean that more people survive serious illness, and thus the percentage of the population with long-term illnesses would increase, particularly among older persons (known as *expanded illness*). This would paradoxically mean that public health would appear to *be worse*, at the same time that average life expectancy increases⁶.

Another possibility is that improved living conditions and medical technology do not only *increase life*, but also shorten *the course of the illness* (known as *compromised illness*). However, the limits of life are reached sooner or later, i.e. there is a genetic ceiling for average life expectancy and for healthy years of living.

Expanded illness and *postponed illness* can be seen as steps along the long road towards *optimal life expectancy* and *compromised illness*. But along with this picture we may see that the road may be lined with changes in evaluations and

⁵ Chapters 14 and 15 in this report include a more in-depth discussion of the technical problems in measuring public health.

⁶ Namely, in newer public health surveys, those who previously would not have survived but now live on with illnesses, are included as a part of the interview material.

knowledge which lead to *reduced under-reporting of illness* in health examinations. Thus, an increase of reported illness does not necessarily mean that the outer conditions for good health have worsened. On the other hand, *the perception* of health care needs may have increased. Consequently, the demand for health care and consumption thus increases.

Chapter 13: Functional ability of older persons

Since 1980, functional ability of older persons has improved in several respects. Above all, this applies to *mobility* (running, walking, going up stairs and getting on to a bus) which has improved, while there are fewer changes concerning the ability of *carrying* heavy objects and *grasping* (i.e. a water tap). *The ability to see* has improved during this period, while *hearing* has worsened.

In addition, the ability to carry out everyday tasks (IADL) such as cleaning, food shopping, food preparation and laundry has improved, while the ability to carry out basic everyday activities (ADL) such as bathing, getting out of bed, and getting dressed has not changed noticeably.

Women's functional ability is worse than men's concerning vision, mobility, grasping and carrying, food shopping and cleaning. Men have more hearing problems and are not as efficient in preparing food. Concerning ADL functions, the difference between the sexes is otherwise small.

Since 1980, men have had a more favourable development concerning the function of mobility "running a shorter distance", and IADL functions. A worsening of hearing over time is greater for women than for men.

Chapter 14: How do older persons actually feel? A methods discussion

A review of current Swedish and international research shows that various Swedish and international studies - such as the LCS - arrive at different conclusions concerning health of older persons.

To a certain extent, these differences are explained by variations in statistical representativity, e.g. that there are considerable differences among surveys concerning non-response, that different definitions have been used for "older persons", etc. In addition, the time periods studied are not the same in the different surveys, and that different epochs have been studied. Moreover, development over time does not seem to have been linear. Several surveys indicate that the negative development during the 1990s deviates from the positive development during the 1970s and 1980s.

But above all, the choice of health indicators plays an important role: development over time differs depending on which health measurements have been used. Our review shows that regardless of differences in methods and statistic representativity, it above all appears that the ability of older persons to carry out everyday tasks (IADL, "instrumental activities of daily living") has improved. At the same time, more and more older persons report specific health problems.

The fact that older persons (like the younger ones) today report to a greater degree than before about different problems and diagnoses can partly be tied to changed levels of expectations and tolerance concerning problems from illness. Expectations can be connected to development within medical technology and the possibilities to treat disorders that were previously not given attention in the same way.

Even if the reported illness does not clearly reflect the underlying state of health, it is difficult to draw conclusions whether the state of health of older persons would have noticeably changed over time. This means that the clear improvements we see concerning the ability of older persons to carry out different activities must have other explanations.

One conclusion close at hand is that it has become easier for many older persons to get about and take part in various activities, despite their illnesses and disabilities. Technical developments in households, increased knowledge concerning food preparation, better-adapted outdoor environments, improved and better-used aids etc. have increased the possibilities to take care of oneself.

The conclusive answer to the question of whether the health of older persons has improved or worsened thus depends on which health indicators have been used. In the international debate on health of older persons, the results have above all been based on the ability to be able to perform various activities, which has been the basis for the conclusion that older persons have become "healthier". If one instead uses problems and diagnoses the picture changes.

Chapter 15: Changes in the state of health of older persons, a methods study

This chapter includes an analysis of the importance of non-response for health descriptions. Non-response in the LCS rose sharply between 1988/89 and 2002/03, from a total of 21.9 percent to 27.0 percent for those over age 64. However, the pattern of non-response did not change to any greater degree. To test the importance of non-response, health and functional changes were estimated between the two time periods in fifteen variables.

Men and women by and large follow the same pattern of health improvement between 1988/89 and 2002/03 in the variables reduced state of health, motor disabilities and reduced IADL (instrumental activities for daily life, such as help with shopping). However, men were shown more favourably than women in the variables of serious motor disabilities and reduced PADL (personal activities for daily life, such as help with personal hygiene). Concerning worsening health, men were less favourable than women in the occurrence of diabetes and anxiety, while only women reported an increase of sleeping disorders from 1988/89 to 2002/03. There was an increased percentage of both men and women who had high blood pressure and pain during the time period.

Among men, the age group 70-84 had the most favourable development during the time period, while the youngest and oldest age groups only showed slight improvements. Women in the 70-74 year age group showed a clear improvement of health in five health indicators, while the oldest age group was unchanged in all health indicators.

Analyses based on only those responding or the entire sample with imputation (random insertion of a value among those who did not answer) resulted in about the same absolute and relative changes of poor health. This means that non-response plays a smaller part if one wants to study changes, both absolutely and relatively. In smaller study domains, uncertainty is greater and thus the differences can be greater.

However, the occurrence (prevalence) of poor health and functional ability was consistently higher when the analysis was based on the entire sample, compared to if it was based on only those who answered. Underestimation was mostly small (< 3 percentage points).

Chapter 16: Changes in care for older persons during the last decades

Reduced level of coverage

The scope, direction and organisation of care for older persons has changed considerably during the last decades. Modern Swedish care for older persons began to expand during the 1950s when municipalities introduced home help services in one's own home. The number of those receiving home help services increased up until the beginning of the 1980s; afterwards the number of those receiving help gradually decreased.

Up until the 1950s, institutional care, often at *old people's homes* was the only social care for older persons that was offered to those with needs for help. The number of places in *special housing* increased slowly up until the mid-1990s, and then decreased during the 2000s.

In 1980, 34 percent of those in the population who were age 80 and over received *home help services*; in 2005 the corresponding figure was 20 percent. The percentage of those in *special housing* dropped from 28 to 17 percent during the same period.

This decrease of care for older persons among young retired persons can be largely explained by better health. But among those over age 80, health improvements have been more limited, and here we see a real decline in the scope of care for older persons. This is illustrated by the gross costs of municipalities per inhabitant over age 80; in 2000 these costs were 15 percent lower compared to 1990.

Care for older persons is concentrated to persons with significant needs for care

During the crisis of the 1990s, cut-backs were made in municipal care for older persons, as well as for medical care within the county councils. The number of hospital beds in emergency care was cut by nearly 50 percent between 1992 and 2003. During the same period the

number of those age 80 and over increased by 22 percent. The reduced number of hospital beds in combination with the increase in the number of older persons in the population, led to more and more discharges of older persons back to their homes with needs for continued care and rehabilitation.

The municipalities chose to concentrate resources for care for older persons to persons who needed a great deal of care. Those who received help received more extensive help than before. The cost per person receiving help increased by 68 percent between 1985 and 2002. Activities that were previously open to a wider group, for example daytime activities, were now only offered to older persons after individual assessment from social workers.

Limitations of assignments for care of older persons

The trend was now towards a changed view of who was eligible for home help services. Older persons with less extensive needs for help are now often not included in the municipal commitment for care. In addition, more people now buy private services and pay from their own pockets. One consequence is that more older persons receive help from family members than compared to 10-15 years ago, and it has also become more difficult for spouses to get help. Access to family members close by to the person in need of help is taken into account when deciding whether assistance is to be given - something that is not supported in Swedish law.

Chapter 17: Home help services and help from family members 1988-2003

Among those interviewed in the LCS/PSAE, the number of persons with home help services dropped during the period 1988-2003. This change was most dramatic for those in the oldest age group (age 80 and over) where the

percentage of those with home help services dropped from 37 to 21 percent.

The objective of home help services is to help people who live in their own homes *if there is a need for help, and if this need cannot be met by the individual or in another way*. The contributions refer to household help or help with personal care. Measured using these measures, the *need* for home help services had dropped, since a lower percentage reported they needed help. The decrease was particularly sharp among men; the number who said they needed help with cleaning, food shopping and preparation, laundry and bathing was cut in half. A similar but weaker trend was found for women.

The reduced need for help could be due to improved mobility in the older population, better access in dwellings and outdoor environment, or increased access to technical aids. The inclination to report needs for help could also influence whether one thinks he or she is able to get help. When it becomes generally known that home help services are more seldom granted to people who "only" need help with tasks in the home, perhaps fewer report a need for help.

The drop in the percentage of those receiving home help services was greater than that corresponding to the reduced need in the population. The likelihood of receiving home help services had dropped by 43 percent since 1988, after a statistical examination for a number of needs-related factors. The formulations in the Social Services Act on the right to assistance have generally not been changed; however, praxis has changed regarding what is reasonable for granting help or when the help can be given in "another way".

Help from family members increased; this trend was particularly evident for women over age 80 who lived alone. The likelihood of women living alone getting help from family members increased by 86 percent.

A considerable shift has thus occurred from formal care (home help services) to informal care (family members).

Chapter 18: Informal helpers

Seen from a total perspective, every fourth person (24 percent) in the population age 55 and over are *informal helpers*: they report regularly helping an older, ill or disabled person in or outside of their own household. Using the scope of the help as the starting point and whether one helps a person within or outside of one's own household, *the helpers can be categorised as caring for a family member, caregivers and helpers*.

Those caring for a family member comprise three percent of the population in the topical age group. These people help a person *within* their own household on a daily basis or several times a week. In four of five cases, this concerns a spouse who is helping his or her partner, while one in five helps another family member. These people give the most extensive help - nine of ten give help every day. The most common age group for this category of helpers is 75-84 years old, and is equally handled by women and men alike.

Caregivers comprise six percent of the population age 55 and over. These people help a person *outside of* their own household on a daily basis or several times a week. Six out of ten help a family member, others a friend, neighbour, colleague or other person they are not related to. Three out of ten give daily help, while seven in ten give help several times a week. The most common age for caregivers are those aged 55-74, and more women than men perform these services.

Helpers comprise the largest group and make up 15 percent of the population age 55 and over. This group gives help once a week or less often. A small number of helpers report they help a person in their own household, but the vast majority (96 percent) help a person

who they do not live with. In six cases out of ten help is given to a family member. Helpers consist equally of women and men, and it is more common that helpers are younger than older.

The number of family members who receive economic compensation from the municipality or county council for their care services has dropped sharply since the 1980s; at the same time the number of informal helpers has increased. Today more and more people work part-time or not at all due to care for family members than those who receive some form of economic compensation. This concerns above all women who lose economically by giving extensive care to their closest ones.

Family members who are caregivers run a higher risk of feeling tired, depressed or feel they lack time for their own activities. Women, but not men, run a very high risk of finding difficulties of having enough time for their own activities.

PART 4

Social relationships and participation

Chapter 19: Family and social networks

Over the past 25 years our social contact networks have developed in somewhat different directions: More people have some very close friend to confide in, and it is more common to socialise with friends and acquaintances outside of the home each week. However, getting together with neighbours has decreased, and it is less common to meet with close relatives. Less people have their own families, and as a result more people live alone.

Among retired persons there are more who live with their own families today than a few decades ago, a consequence that older people live longer and are healthier. The time when one loses his or

her partner has shifted upwards in age. In addition, after the expansion of home help services and home health care, more older people can live on in their own homes with their spouses/partners, even if they have been hit by illness.

After age 55, activities in work and other areas begin to decrease, and more people spend time at home. Close contacts with neighbours increases again after retirement age. Among those age 55 and over, 50-60 percent are together with one or more people in their circle of acquaintances at least once a week or more who are not close relatives, colleagues or neighbours. Approximately 320 000 retired persons live without any relationships except for close relatives, if any.

Most people (slightly more than 80 percent) have one or several very close friends. As people grow older, the circle of friends becomes considerably smaller ("*close friends outside of the home, who can be contacted for talks about anything at all*"). After age 75, over 30 percent no longer have a close friend, particularly among older men. The functional equivalent for men is often their partner.

Chapter 20: Social relationships and feelings of loneliness

The main purpose of this chapter has been to analyse the importance of social relationships for *experiences of loneliness among older persons*: What is the significance of absence of a rich social life and social isolation, as well as contacts with family members, neighbours, ex-colleagues, friends for various age groups?

Eighty-one percent of those over age 84 and 53 percent of those between 75 and 84 live alone, high figures in relation to other age categories of adults. Of those over age 55 with children who have left home, around two thirds report that they *meet and get together with their children* several times a week. The older one is, the more common it is to have *daily*

telephone, SMS or e-mail contacts with their adult children. However, the oldest people are less likely to have contacts with any siblings.

It is more common that those older than age 65 often *get together with their neighbours*, but less common they meet *colleagues* and other *friends* or *acquaintances*, compared to younger age categories.

The higher the age, the greater the risk for *social isolation*, regarding the many types of contacts, and that there is no access to a close contact.

The interview data concerning *the subjective feeling of loneliness* suggests that there are relatively few, regardless of age, who report that their social situation is considered a big problem. Of those who are over age 84, 38 percent say they never feel alone, compared to about half of those between ages 55 and 74.

What then is the importance of the various types of social relationships? Close relationships within the family are generally of greater importance for the subjective feeling of loneliness among the oldest persons. The absence of a partner and limited contacts with adult children and siblings has a more negative impact on the subjective feeling of loneliness among the oldest people, compared to the younger ones. In addition, getting together with friends and acquaintances is more important for the feeling of loneliness for those who are older.

Many of the oldest people often do not have access to those social relationships - and above all the close relationships within the family - which are of great importance for their feeling of being socially integrated, or alternatively isolated. This explains why they report more feelings of loneliness than younger people. It is important to try to create good conditions so that older people can be able to maintain old relationships and develop new ones as their partners, siblings and other friends

pass away. By doing so, older people can feel themselves socially integrated and are able to experience a feeling of social community.

Chapter 21: Leisure

This chapter includes a mix of different types of leisure activities. The studies illustrate increased activity among older persons and partially decreased activity among younger ones.

Outdoor activities, being outdoors and exercise: Concerning the question "About how often do you leave your home to be outdoors, go shopping, take walks or visit an acquaintance?", around 75 percent of all those over age 55 reply *they are outdoors daily*. The figure for those age 85 and over is about 37 percent. But about 8 percent are only outdoors a few times a month or even less often. Above all, this applies to the oldest women (age 85 and over), all of 43 percent. These are persons who have some serious health problem and are tied to the home.

Activities such as *gardening*, *walking about in the woods and countryside* and *"walking for enjoyment"* have sharply *increased*. The generational differences are striking: while the level of activity of young people is steadily dropping, this level is on the contrary sharply increasing among the oldest ones, aged 75-84.

Physical exercise has grown very extensively in scope during recent decades, above all among women. Nowadays, only about one in ten in the population is passive, and *completely avoids exercise*. This passivity has dropped sharply among older persons. This is most apparent among the oldest ones: about 20 percent of those aged 75-84 do not get any exercise, but this figure is much lower (down 17 percentage points) than the beginning of the 1980s.

Even up until ages 75-84, every third person gets exercise at least two times a week, which is twice as much as in the beginning of the 1980s.

Hobbies: Nearly two-thirds of all those age 55 and over say they have one or more hobbies. Most of these people dedicate time to their hobbies "daily" or "several times a week", and they are also happy with their chances to do so. Health problems and lack of time are listed as hindrances. However, only a few, about 4-5 percent say "lack of money" is a reason for not having a hobby.

Cultural activities include visits to the theatre, concerts, the library and cinema, reading and participating in study circles.

In total we can see an increase in visits to the theatre in all age categories since the beginning of the 1980s. Men and women in the upper middle-age category and those of retirement age account for the sharpest increase.

Close to 40 percent of the population aged 20-84 report they *read books by and large every week*. Most of these people read *fiction* (novels, crime stories, short stories and the like). The percentage of women is nearly twice as high as that of men. However, today there is little difference among the different generations. While younger people read fewer books, a sharp increase has occurred among women who are retired. On the other hand, men of all ages report a reduced interest in reading.

In contrast to reading books, *visits to the library* have increased markedly for all ages. We also see a sharp generational change concerning participation in study circles, which has increased for those over age 65.

Visits to places of worship have steadily decreased, and by the end of the 1990s this figure was about 37 percent (at least one visit per year). These visits increase for people who are older, and figures are higher for women of all ages. However, the decrease during the period was most evident for middle-aged and older persons (mainly women).

Computers and Internet in the home are mostly used by younger persons: over 80 percent of those under age 55 have access to a computer in the home. The figure for those aged 75-84 is 17 percent.

Chapter 22: Political resources and activities

Influence can be made either *collectively* through participation in organisations or *individually* through action and direct contacts with decision-makers. A prerequisite for influence is also *competence* in the form of knowledge and ability to identify the rules and pathways of decision-making. Our social indicators cover these three aspects. Development since the 1980s points towards more active, interested and knowledgeable retired persons, where the winding down of interest occurs later and later in life.

Commitment to *associations* for the total population has sharply decreased compared to the 1980s. *Membership in political parties* has dropped by over 50 percent since the beginning of the 1980s. Levels at the middle of the 1980s were still around 15-16 percent of the population. Since then the trend has pointed sharply downward - in 2005 the level was 5 percent. All in all we see a clear picture that re-growth in the parties is sharply declining, but that older faithful members are found among older and older people. As a result, political parties are marked by the many older people; the same holds true for participation in political meetings.

Regarding membership to organisations in areas other than political ones, retired persons lie above the average of the population regarding associations for patients and the handicapped, women's organisations, associations within the Church of Sweden, temperance associations, humanitarian associations and fraternal associations. About 40 percent are members in various associations for

retired persons. However, retired persons are under-represented within sports associations, environmental organisations, motor organisations, immigrant organisations and groups dealing with international issues. But the overall results point towards an extensive level of activity for people in the oldest age category.

We have also asked if the respondents were able to *write a letter and appeal against a decision by an authority*". Self-confidence among older persons has risen sharply.

Chapter 23: Victims of crime

The number of victims of violence/threats has increased over the past 25 years. This is illustrated in the annual LCS and the official crime statistics of police-reported cases of bodily harm etc. The trends for both of these statistical sources can be a consequence of two courses of events in society. Firstly, the actual level of violence/threats *may in reality have increased* to some degree, and secondly that the results may reflect an *increasing observation and sensitivity for violence and threats*.

The risk for violence or threats is highest among the youngest age group and gradually drops with increasing age. Violence and threats are very unusual for those over age 65 (only some few percent). The entire increase in the number of victims of crime is accounted for by persons aged 20-29.

However, we have since the beginning of the 1980s seen that *worry about being a victim of crime or threats* is very common among the older generations. In total, about 520 000 retired persons over age 55 report they have "at some time refrained from going out in the evening". This is a very high figure that does not correspond to the objective risks. Nevertheless this worry is a serious welfare problem.

In our survey of several "*distressing conditions*" that can affect the security of people, we see among other things that *worry about one's own health* has dropped down into younger age groups, and this has brought on a clear equalisation among the generations. Older people thus feel relatively more alert than in the beginning of the 1980s. We also see that *concern over one's financial situation* is above all higher among younger and middle-aged people than for retired persons.

